CDP-C245/C345/C741

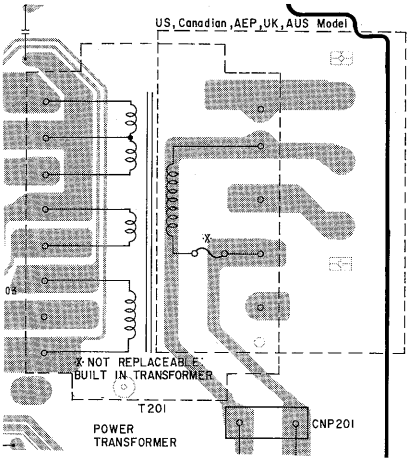
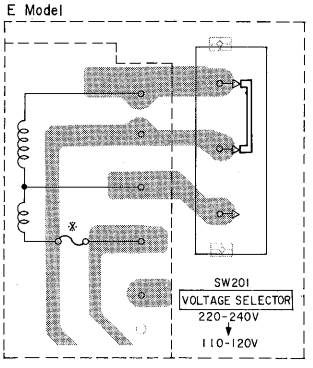
SERVICE MANUAL

Discard CDP-C245/C345/C741 Service Manual (No. 9-959-393-11) previously issued. This Service Manual contains it.

US Model
Canadian Model
CDP-C245/C345/C741
AEP Model
UK Model
Australian Model
CDP-C245/C345
E Model
CDP-C345

- **CDP-C245/C345/C741 are similar to the earlier CDP-C235.**
- **Refer to CDP-C235 service manual for information not contained in this service manual.**
- **Refer to CDP-C245 (UK Model) for CDP-C235 (AEP Model) service manual.**
- **Refer to CDP-C345 (E Model) for CDP-C235 (US Model) service manual.**

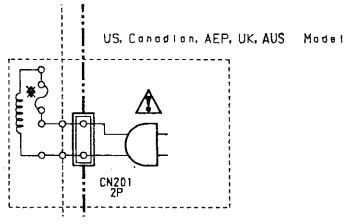
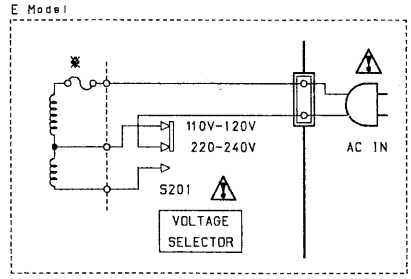
5-3. PRINTED WIRING BOARDS (See page 14)

Page	CDP-C235 (US Model)	CDP-C345 (E Model)
14	ADDRESS: B-22 	

COMPACT DISC PLAYER

SONY®

5-4. SCHEMATIC DIAGRAM (See page 18)

Page	CDP-C235 (US Model)	CDP-C345 (E Model)
18	ADDRESS: N-21 	

EXPLODED VIEWS
For CDP-C345 (E Model), refer to the "all destinations" and difference table for E model.

CDP-C245 (All Destinations) Difference Table

Page	CDP-C235 (All Destinations)			CDP-C245 (All Destinations)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
21	9	X-4943-510-1	PANEL ASSY, FRONT (US, CND)	9	X-4944-531-1	PANEL ASSY, FRONT (US, CND)
	9	X-4943-511-1	PANEL ASSY, FRONT (AEP, AUS)	9	X-4944-532-2	PANEL ASSY, FRONT (AEP, AUS, UK)
	11	4-957-560-51	PANEL, LOADING	11	4-964-390-11	PANEL, LOADING
22	* 72	4-957-560-51	PANEL, BACK (US, CND)	* 72	4-964-324-51	PANEL, BACK (US, CND)
	* 72	4-957-560-61	PANEL, BACK (AEP)	* 72	4-964-324-62	PANEL, BACK (AEP)
				* 72	4-964-324-92	PANEL, BACK (UK)
	* 72	4-957-560-31	PANEL, BACK (AUS)	* 72	4-968-761-01	PANEL, BACK (AUS)
	⚠74	1-590-836-11	CORD, POWER (US, CND)	⚠74	1-575-042-21	CORD, POWER (US, CND)
	⚠74	1-575-651-21	CORD, POWER (AEP)	⚠74	1-575-651-21	CORD, POWER (AEP)
	⚠74	1-696-845-11	CORD, POWER (AUS)	⚠74	1-696-845-11	CORD, POWER (AUS)
	⚠74	1-575-651-21	CORD, POWER (AEP)	⚠74	1-751-529-11	CORD, POWER (UK)

CDP-C345 (All Destinations) Difference Table

Page	CDP-C235 (All Destinations)			CDP-C345 (All Destinations)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
21	9	X-4943-510-1	PANEL ASSY, FRONT (US, CND)	9	X-4944-529-1	PANEL ASSY, FRONT (US, CND)
	9	X-4943-511-1	PANEL ASSY, FRONT (AEP, AUS)	9	X-4944-530-2	PANEL ASSY, FRONT (AEP, UK, AUS, E)
	11	4-957-557-11	PANEL, LOADING	11	4-964-390-01	PANEL, LOADING
	12	4-957-548-11	PLATE (FL), INDICATION	12	4-957-548-01	PLATE (FL), INDICATION
22	* 72	4-957-560-51	PANEL, BACK (US, CND)	* 72	4-964-324-01	PANEL, BACK (US, CND)
	* 72	4-957-560-61	PANEL, BACK (AEP)	* 72	4-964-324-12	PANEL, BACK (AEP)
	* 72	4-957-560-31	PANEL, BACK (AUS)	* 72	4-964-324-31	PANEL, BACK (AUS)
				* 72	4-964-324-22	PANEL, BACK (UK)
				* 72	4-964-324-41	PANEL, BACK (E)

CDP-C245/C345 (US, CND Model) Difference Table

Page	CDP-C235/C335 (US, CND Model)			CDP-C245/C345 (US, CND Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
23	* 104	4-957-555-01	SHEET, INSULATING			
	105	3-531-576-11	RIVET			

CDP-C741 (US, CND Model) Difference Table

Page	CDP-C235 (US, CND Model)			CDP-C741 (US, CND Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
21	9	X-4943-510-1	PANEL ASSY, FRONT	9	X-4943-533-1	PANEL ASSY, FRONT
	11	4-957-560-51	PANEL, LOADING	11	4-964-390-01	PANEL, LOADING
22	* 72	4-957-560-51	PANEL, BACK	* 72	4-964-324-71	PANEL, BACK
23	* 104	4-957-555-01	SHEET, INSULATING			
	105	3-531-576-11	RIVET			

CDP-C345 (E Model) Difference Table

Page	CDP-C235 (US Model)			CDP-C345 (E Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
22	* 73	3-703-244-00	BUSHING (2104), CORD	⚠64	1-569-007-11	ADAPTER, CONVERSION 2P
	74	1-590-836-11	CORD, POWER	* 73	3-703-571-11	BUSHING (S), (4516), CORD
				⚠74	1-696-027-11	CORD, POWER
23	* 104	4-957-555-01	SHEET, INSULATING			
	105	3-531-576-11	RIVET			
	106	A-4649-656-A	MAIN BOARD, COMPLETE	106	A-4673-014-A	MAIN BOARD, COMPLETE
	⚠T901	1-423-553-11	TRANSFORMER, POWER	⚠S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (E)
				⚠T901	1-423-993-11	TRANSFORMER, POWER

CDP-C245/C345/C741 (Except E Model) Difference Table

Page	CDP-C235 (All Destination)			CDP-C245/C345/C741 (Except E Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
23	⚠T901	1-423-553-11	TRANSFORMER, POWER (US, CND)	⚠T901	1-423-872-11	TRANSFORMER, POWER (US, CND)
	⚠T901	1-423-554-11	TRANSFORMER, POWER (AEP, AUS)	⚠T901	1-423-992-11	TRANSFORMER, POWER (AEP, AUS, UK)

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
  AUS : Australian model

ELECTRICAL PARTS LIST

CDP-C245/C345/C741 (All Destinations) Difference Table

Page	CDP-C235			CDP-C245/C345/C741 (All Destinations)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
29	⚠74	1-590-836-11	CORD, POWER (US, CND)	⚠74	1-575-042-21	CORD, POWER (US, CND)
	⚠74	1-575-651-21	CORD, POWER (AEP)	⚠74	1-575-651-21	CORD, POWER (AEP)
	⚠74	1-696-845-11	CORD, POWER (AUS)	⚠74	1-696-845-11	CORD, POWER (AUS)
	⚠74	1-575-651-21	CORD, POWER (AEP)	⚠74	1-751-529-11	CORD, POWER (UK)
		3-756-520-11	MANUAL INSTRUCTION		3-758-048-11	MANUAL INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE) (AEP, UK, E)
		3-756-520-21	MANUAL INSTRUCTION		3-758-048-21	MANUAL INSTRUCTION (ENGLISH) (US, CND, AUS)
		3-756-520-31	MANUAL INSTRUCTION		3-758-048-31	MANUAL INSTRUCTION (FRENCH) (CND)
		3-756-520-41	MANUAL INSTRUCTION		3-758-048-41	MANUAL INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP)
		3-756-520-61	MANUAL INSTRUCTION		3-758-048-51	MANUAL INSTRUCTION (ENGLISH, SWEDISH, FINNISH, DANISH) (AEP)
	*	4-958-473-01	INDIVIDUAL CARTON	*	4-964-766-01	INDIVIDUAL CARTON (C245:US, CND)
				*	4-964-767-01	INDIVIDUAL CARTON (C245:AEP, UK)
				*	4-964-768-01	INDIVIDUAL CARTON (C345:US, CND, AUS, E)
				*	4-964-769-01	INDIVIDUAL CARTON (C345:AEP, UK)
				*	4-964-771-01	INDIVIDUAL CARTON (C741)
					1-467-123-11	REMOTE COMANDER (RM-D335) (C345)
					4-959-044-01	COVER BATTERY (For RM-D335) (C345)

CDP-C345 (E Model) Difference Table

Page	CDP-C235 (US Model)			CDP-C345 (E Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
26	*	A-4649-656-A	MAIN BOARD, COMPLETE	*	A-4673-014-A	MAIN BOARD, COMPLETE
27				⚠S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE
29				⚠64	1-569-007-11	ADAPTER, CONVERSION 2P
	⚠74	1-590-836-11	COAD, POWER	⚠74	1-696-027-11	COARD, POWER
	⚠T901	1-423-553-11	TRANSFORMER, POWER	⚠T901	1-423-993-11	TRANSFORMER, POWER

CDP-C245/C345/C741 (Except E Model) Difference Table

Page	CDP-C235 (All Destination)			CDP-C245/C345/C741 (Except E Model)		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
29	⚠T901	1-423-553-11	TRANSFORMER, POWER (US, CND)	⚠T901	1-423-872-11	TRANSFORMER, POWER (US, CND)
	⚠T901	1-423-554-11	TRANSFORMER, POWER (AEP, AUS)	⚠T901	1-423-992-11	TRANSFORMER, POWER (AEP, AUS, UK)

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
  AUS : Australian model

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CDP-C235/C335

SERVICE MANUAL

US Model
Canadian Model
AEP Model
CDP-C235/335
Australian Model
CDP-C235
UK Model
E Model
CDP-C335

Photo : CDP-C235

Model Name Using Similar Mechanism	CDP-C225/C325
Optical Pick-up Block Type	BU-5BD13

SPECIFICATIONS

Compact Disc Player

System	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780-790 nm
Frequency response	2 Hz-20 kHz (±0.5 dB)
Signal to noise ratio	More than 102 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.0045%
Channel separation	More than 100 dB

Outputs

LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
PHONES (stereo phone jack)	Output level max. 10 mW Load impedance 32 ohms (CDP-C335 only)

General

Power requirements	Model for US and Canadian 120V AC, 60Hz Model for Australian and UK 240V AC, 50/60 Hz Model for E 110—120V, 220—240V AC, 50/60Hz
Power consumption	14 W
Dimensions (w/h/d)	Approx. 430 × 125 × 385 mm (17 × 5 × 15¼ inches) (CDP-C335/C235) Including projecting parts and controls
Mass	Approx. 5.6 kg , net (12 lbs 6oz) (CDP-C335/C235)

Remote Commander **RM-D335 (CDP-C335 only)**

Remote control system	Infrared control
Power requirements	3 V DC with two size AA batteries (IEC designation R6)
Dimensions	45 × 185 × 20 mm (w/h/d) (1 13/16 × 7 3/8 × 13/16 inches)
Mass	100 g (3.5 oz) including batteries

Supplied accessories

Audio signal connecting cord
(phono plug x 2 — phono plug x 2) (1)
Remote commander (1) (CDP-C335 only)
Sony SUM-3 (NS) batteries (2) (CDP-C335 only)
AC plug adaptor (1) (CDP-C335 E model only)

Design and specifications are subject to change without notice.

使用時は添付資料も参照のこと
Refer to the additional documents.

COMPACT DISC PLAYER

SONY®

For the Customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

For the Customers in Australia

The following caution label is located inside of the unit.

DANGER	DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DERECT EXPOSURE TO BEAM.	RADIATION DE LESER INVISIBLE LORS D'OUVERTURE AVEC L'ENCLENCHEMENT DE SECURITE ANNULE. EVITER L'EXPOSITION DIRECTE AU RAYON. 4-906-403-01

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

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SAFETY-RELATED COMPONENT WARNING!!

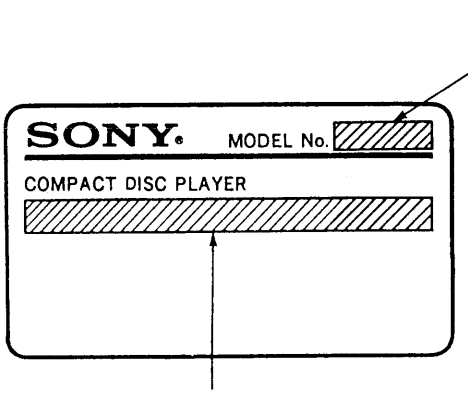
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

—Model Number Label—



US, Canadian model : AC : 120V 60Hz
UK, Australian model : AC : 240V~50/60Hz
AEP model : AC : 220–230V~50/60Hz
E model : AC : 110–120V, 220–240V~50/60Hz

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

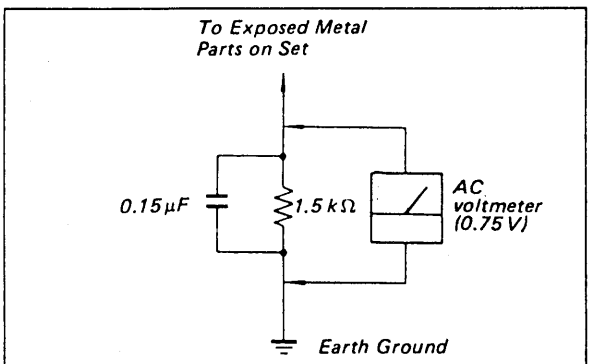


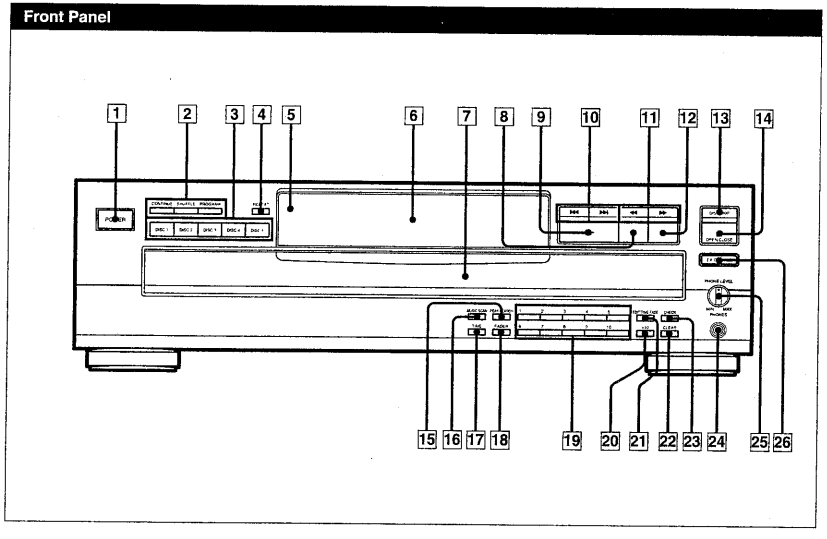
Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Identifying the Parts

Front Panel

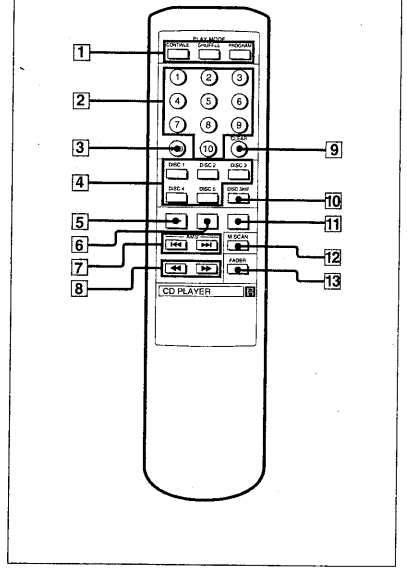


See the pages indicated in ( ) for details.

1 POWER switch (8)
2 PLAY MODE buttons
  CONTINUE button (8)
  SHUFFLE button (13)
  PROGRAM button (14)
3 DISC 1-5 buttons (8)
4 REPEAT button (18)
5 Remote sensor (4)
6 Display window (8)
7 Disc tray (8)
8 II (pause) button (8)
9 ▶ (play) button (8)
10 I◀◀/▶▶I (AMS*) buttons (10)
11 ◀◀/▶▶ (manual search) buttons (10)
12 ■ (stop) button (8)
13 DISC SKIP button (8)
14 ⏏ OPEN/CLOSE button (8)
15 PEAK SEARCH button (19)
16 MUSIC SCAN (M. SCAN) button (17)
17 TIME button (9)
18 FADER button (12)
19 Numeric buttons (10)
20 >10 (over 10) button (10)
21 EDIT/TIME FADE button (20)
22 CLEAR button (14)
23 CHECK button (16)
24 PHONES jack (CDP-C335 only) (9)
25 PHONE LEVEL control (CDP-C335 only) (9)
26 EX-CHANGE button (11)

* AMS is the abbreviation for Automatic Music Sensor.

Remote Commander (CDP-C335 only)

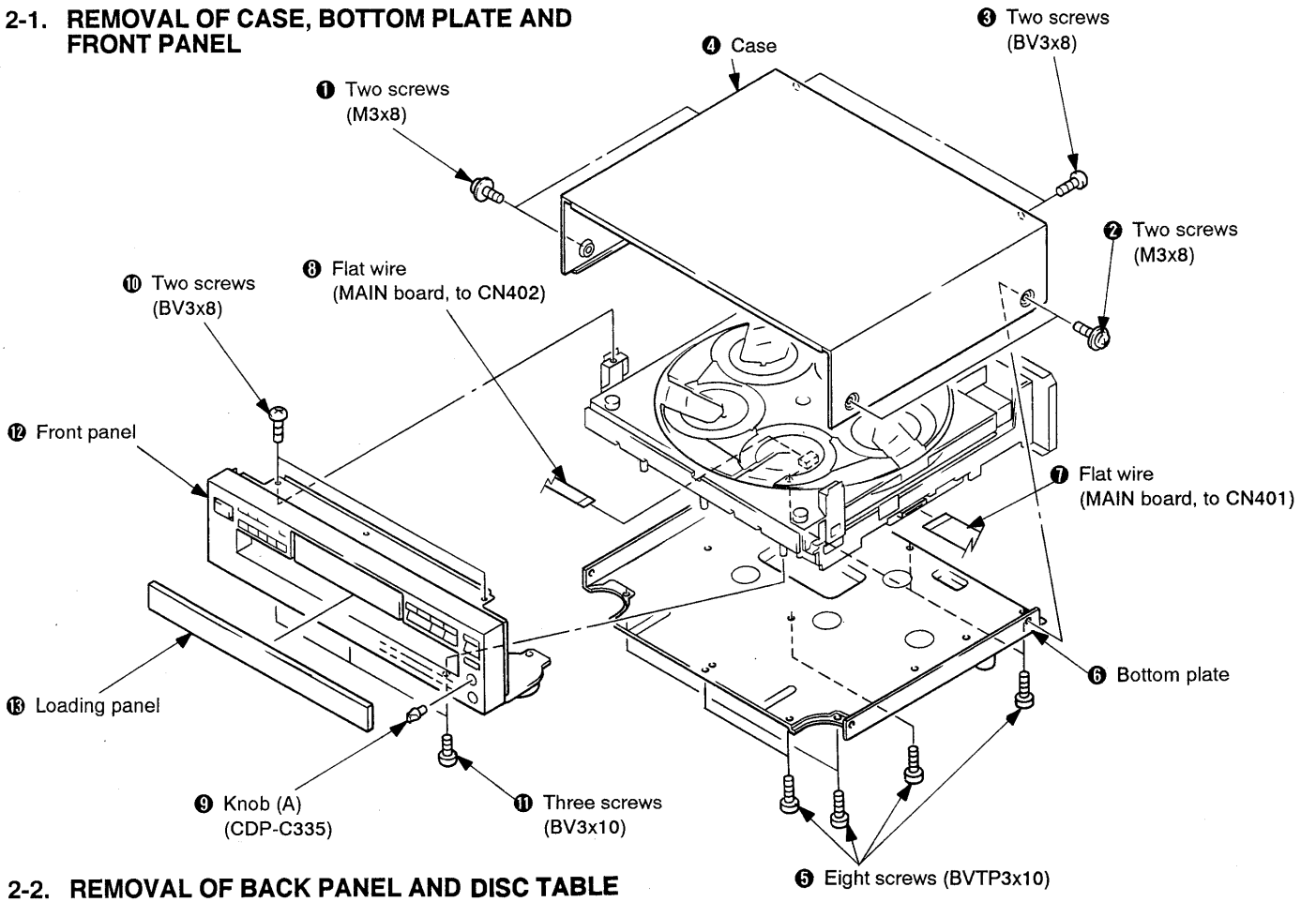


See the pages indicated in ( ) for details.

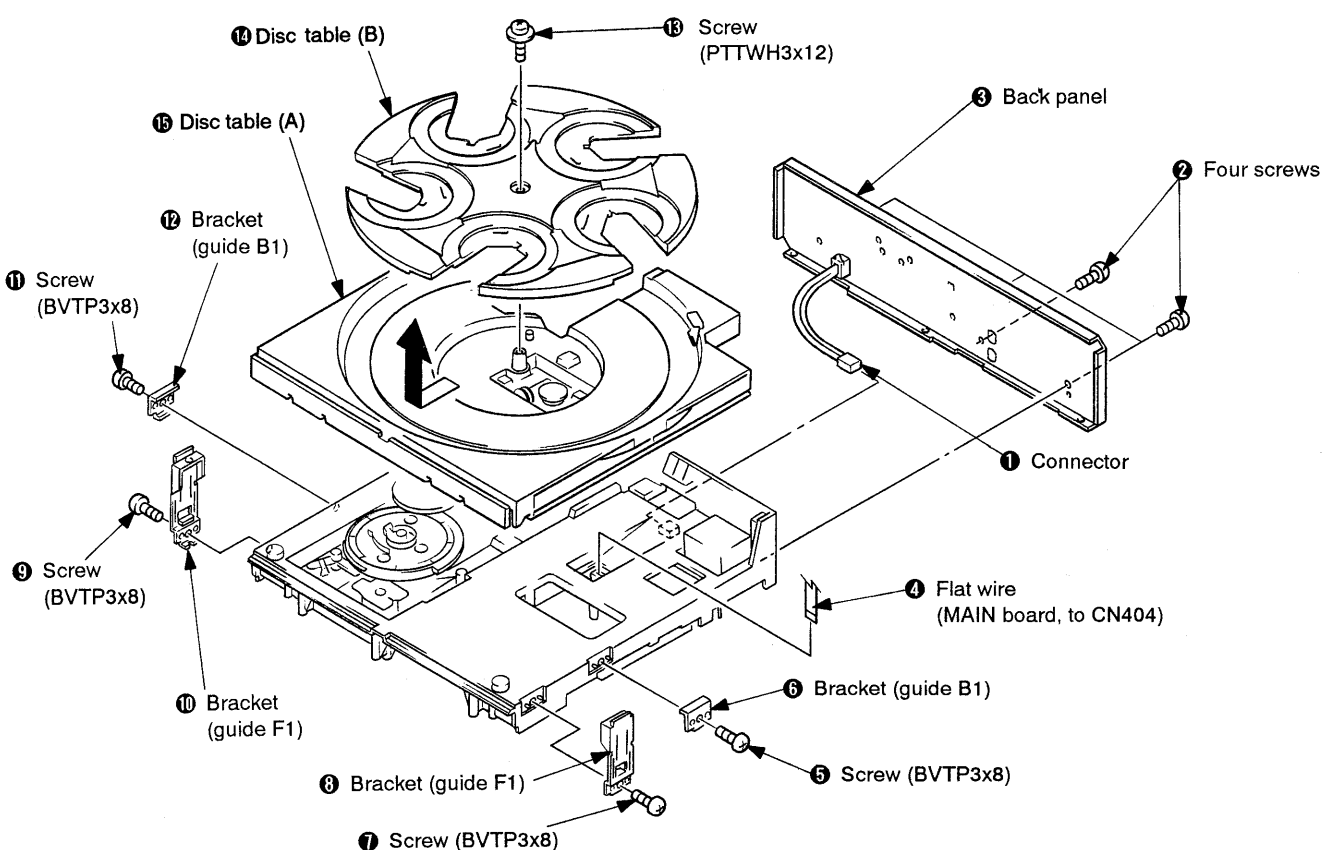
1 PLAY MODE buttons
  CONTINUE button (8)
  SHUFFLE button (13)
  PROGRAM button (14)
2 Numeric buttons (10)
3 >10 (over 10) button (10)
4 DISC 1-5 buttons (8)
5 ▶ (play) button (8)
6 II (pause) button (8)
7 I◀◀/▶▶I (AMS) buttons (10)
8 ◀◀/▶▶ (manual search) buttons (10)
9 CLEAR button (14)
10 DISC SKIP button (8)
11 ■ (stop) button (8)
12 MUSIC SCAN (M. SCAN) button (17)
13 FADER button (12)

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF CASE, BOTTOM PLATE AND FRONT PANEL

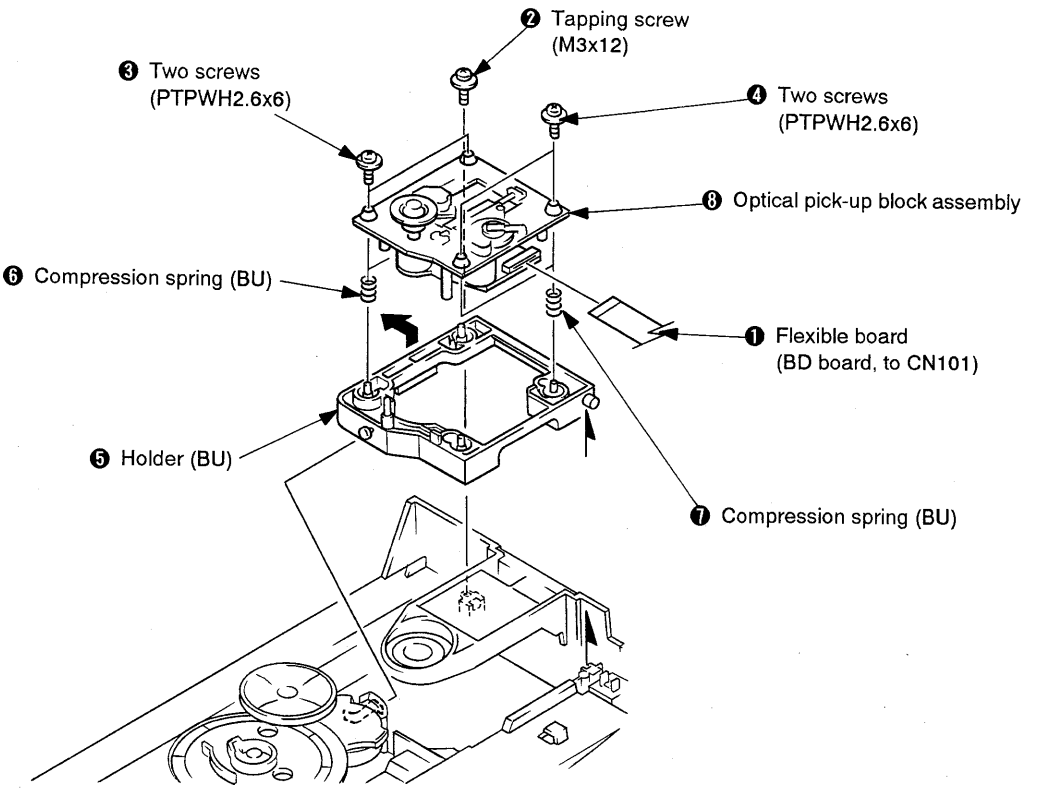

❸ Two screws (BV3x8)
❹ Case
❶ Two screws (M3x8)
❷ Two screws (M3x8)
❿ Two screws (BV3x8)
❽ Flat wire (MAIN board, to CN402)
⓬ Front panel
❼ Flat wire (MAIN board, to CN401)
❻ Bottom plate
⓭ Loading panel
❾ Knob (A) (CDP-C335)
⓫ Three screws (BV3x10)
❺ Eight screws (BVTP3x10)

2-2. REMOVAL OF BACK PANEL AND DISC TABLE

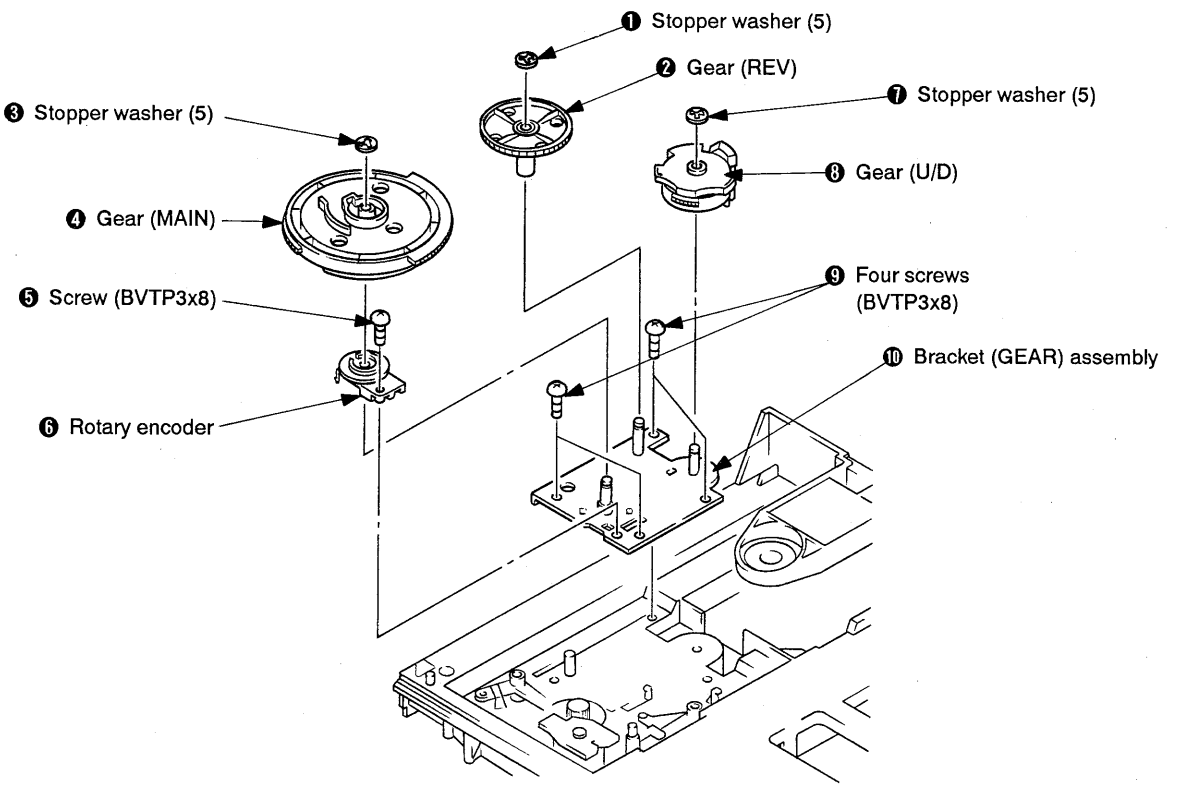


SEE ADDITIONAL INFORMATION

2-3. REMOVAL OF OPTICAL PICK-UP BLOCK ASSEMBLY


❷ Tapping screw (M3x12)
❸ Two screws (PTPWH2.6x6)
❹ Two screws (PTPWH2.6x6)
❽ Optical pick-up block assembly
❻ Compression spring (BU)
❶ Flexible board (BD board, to CN101)
❺ Holder (BU)
❼ Compression spring (BU)

2-4. REMOVAL OF BRACKET (GEAR) ASSEMBLY

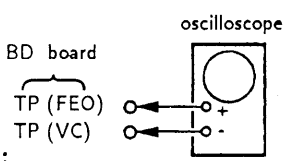


SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

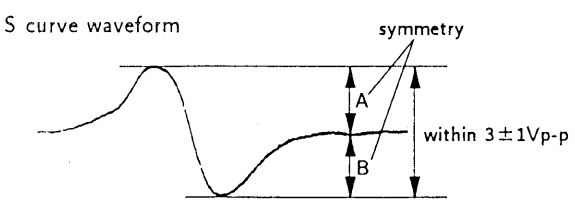
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FE1) and TP (VC) by lead wire
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

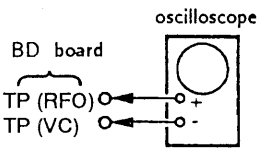


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

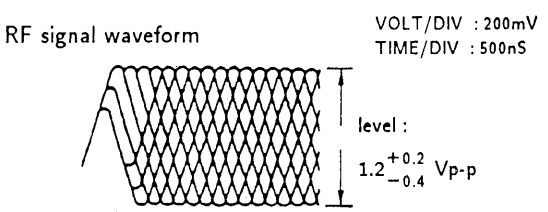


Procedure :

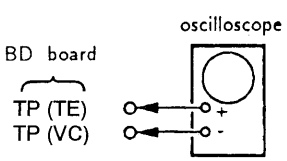
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

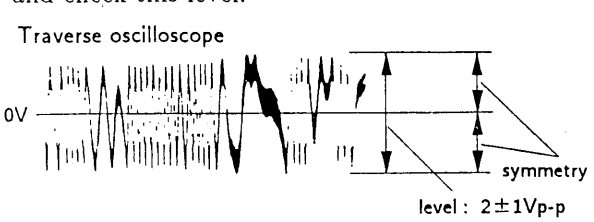


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

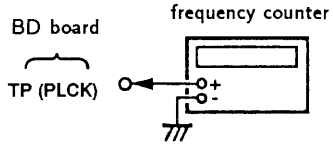


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

Focus/Tracking Gain

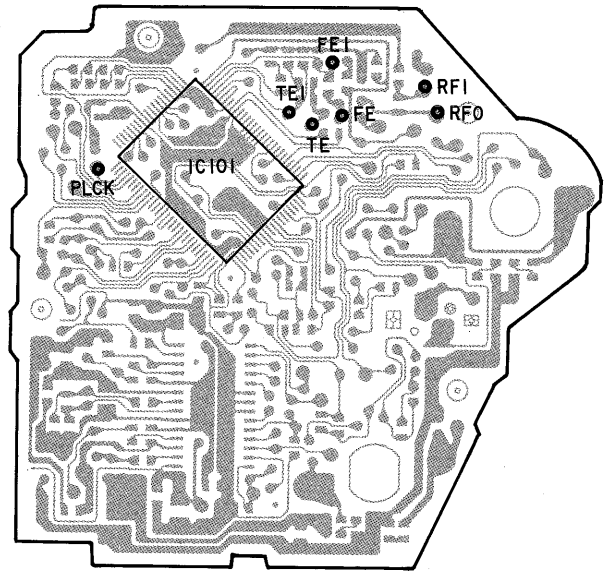
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Locations :
[BD board]

— conductor side —



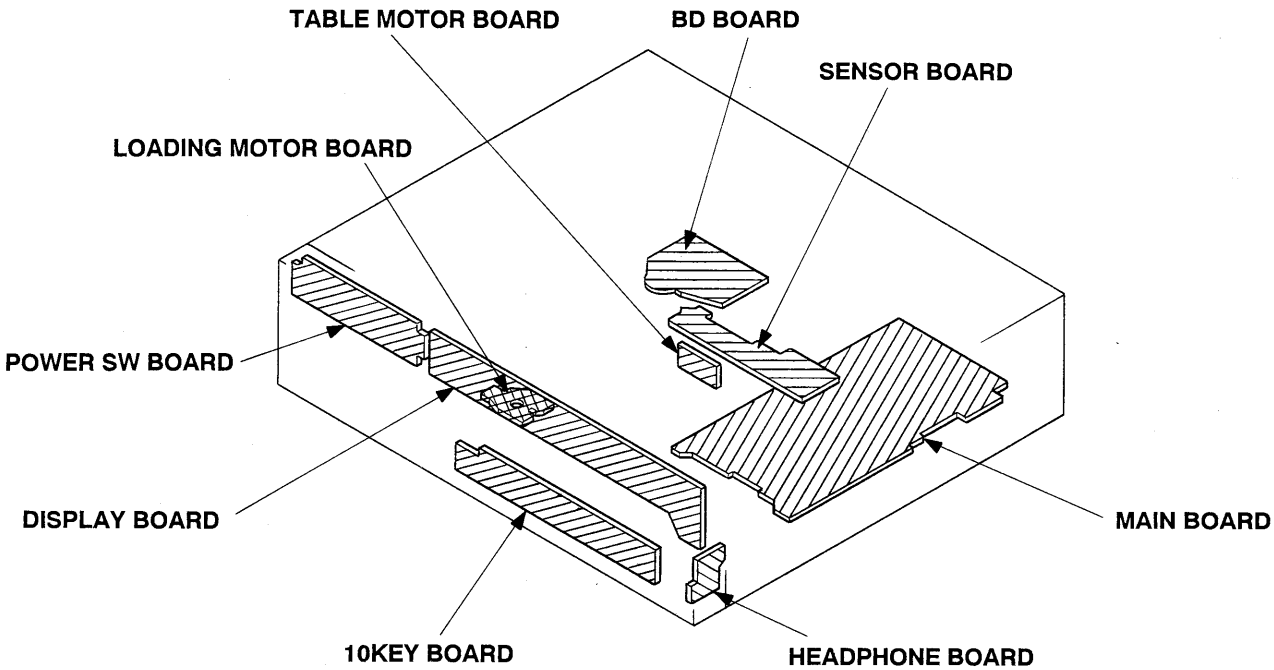
SECTION 4
IC PIN FUNCTIONS

CXP82316-020Q (IC401) PIN FUNCTIONS

PIN No.	PIN NAME	I/O	FUNCTION
1	AF ADJ	I	Test mode pin. Normally: "H"
2	RM IN	I	Remote control signal input pin.
3	ADJ	I	Test mode pin. Normally: "H"
4	A MUTE	O	Analog muting control signal output pin.
5	LDON	O	Optical pick-up laser diode control pin. ON: "H"
6	T.SENS	I	Slit sensor of disc table input pin.
7	PRGL	O	Latch signal output pin to digital filter IC.
8	CLK	O	Serial clock output pin.
9	XLT	O	Serial data latch signal output pin.
10	DATA	O	Serial data output pin.
11	SQCLK	O	Subcode Q data readout clock output pin.
12	SUBQ	I	Subcode Q data input pin.
13	SCLK	O	Internal register of SSP/DSP readout clock output pin.
14 to 16	ENC1 to ENC3	I	Loading encoder input pin.
17 to 20	–	–	Not used.
21	L.MODE	I	Loading mode setup pin.
22 to 27	KEY0 to KEY5	I	Key input pin. (A/D)
28	PICK	I	Optical pick-up setup pin. 0V: KSS-240A, 2.5V: KSS-390A, 5V: Automatic discrimination
29	D.MODE	I	Disc table feeling and stop precision fine adjustment pin.
30	XRST	I	Reset signal input pin.
31	X1	I	10MHz clock input pin.
32	X2	O	10MHz clock output pin.
33	GND	–	GND
34	LODOUT	O	Loading motor control pin.
35	LODIN	O	Loading motor control pin.
36	TBLL	O	Table motor control pin.
37	TBLR	O	Table motor control pin.
38 to 57	P1 to P20	O	FL segment output pin.
58 to 62		–	Not used.
63 to 70	G1 to G8	O	FL timing output pin.
71	–30V	–	–30V
72	+5V	–	+5V
73		–	+5V
74 to 77		–	Not used.
78	D.SENS	I	Disc sensor input pin. "L": disc present.
79	SENSE	I	SENSE signal input pin.
80	SCOR	I	Subcode Q data readout timing signal input pin.

SECTION 5
DIAGRAMS

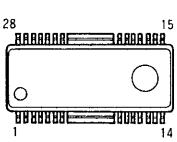
5-1. CIRCUIT BOARDS LOCATION



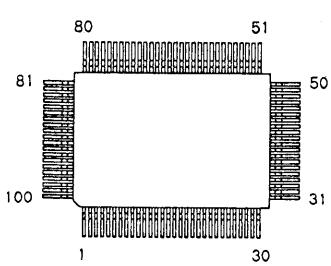
5-2. SEMICONDUCTOR LEAD LAYOUTS

BA6191

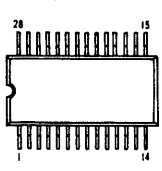
BA6392FP-T1



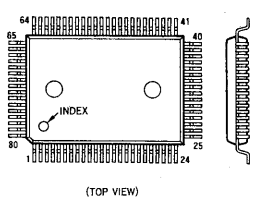
CXD2515Q
CXD2599Q



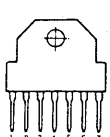
CXD25605M-T6



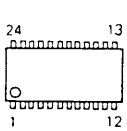
CXP82316-020Q



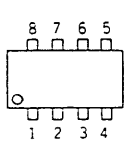
LA5602



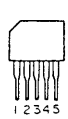
LA9215



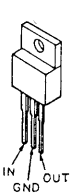
M5218AP



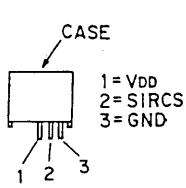
M5293L



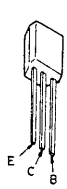
M5F78M07



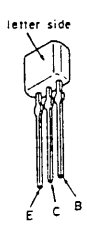
SBX1610-59



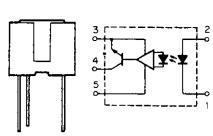
2SC2603-EF
DTA114ES
DTC114ES



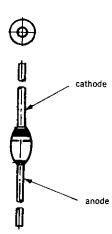
2SA1175-HFE
DTC144ES



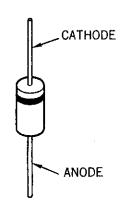
RPI-1391



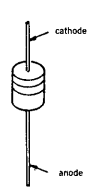
MTZJ-T-72-6.2A



1N4148M



11ES2
RD6.2ES-B1
RD9.1ES-B2



5-3. PRINTED WIRING BOARDS

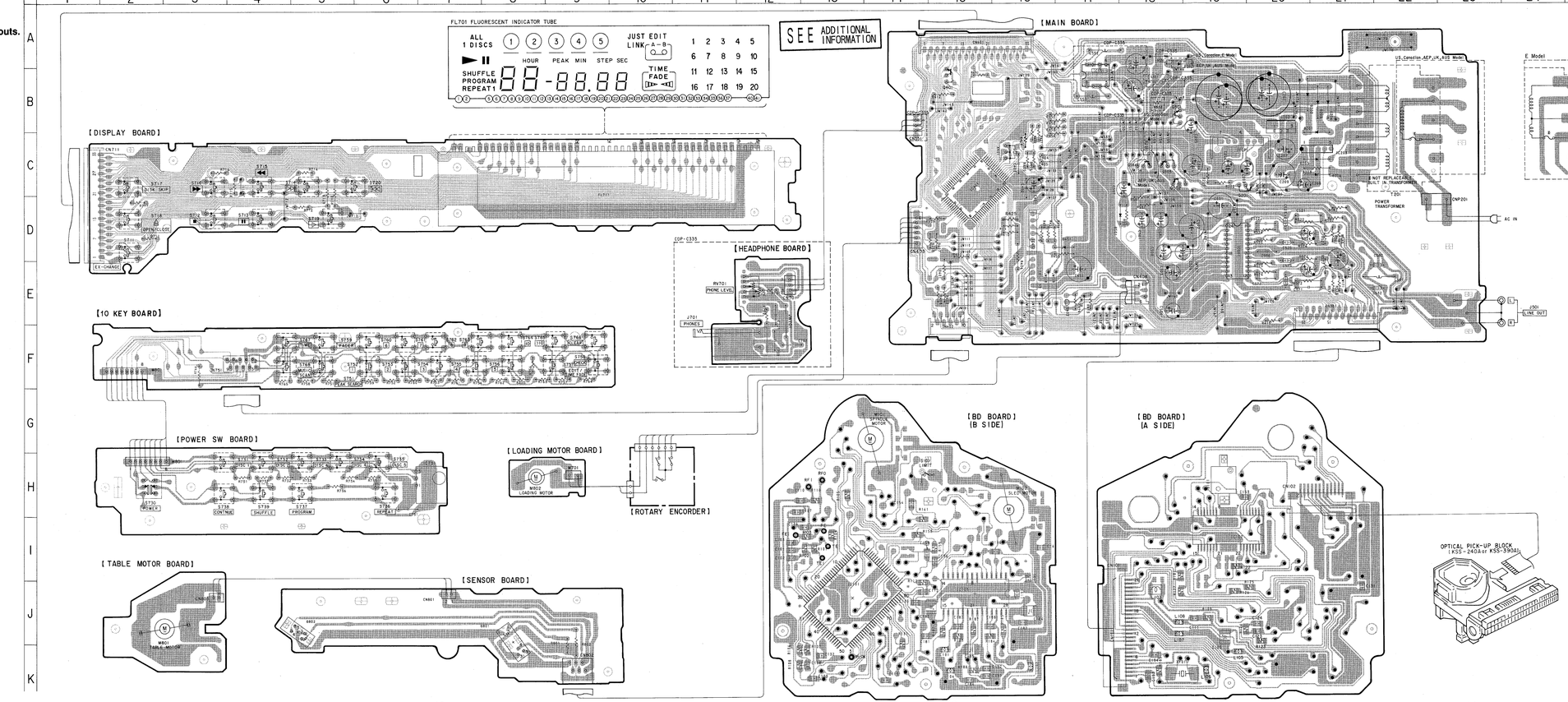
•See page 10 for Circuit Boards Location and Semiconductor Lead Layouts.

SEMICONDUCTOR LOCATION

Ref. No.	Location
D201	C-21
D202	B-20
D203	B-21
D204	B-21
D205	C-21
D206	C-21
D207	B-18
D208	C-18
D451	E-17
D501	D-17
D801	K-5
D802	K-8
IC101	J-13
IC102	I-19
IC103	J-15
IC201	C-19
IC203	C-21
IC401	D-15
IC501	E-19
IC551	B-17
IC731	H-7
Q201	D-19
Q401	B-15
Q402	E-17
Q501	C-18
Q502	D-18
Q503	C-18
Q504	C-18

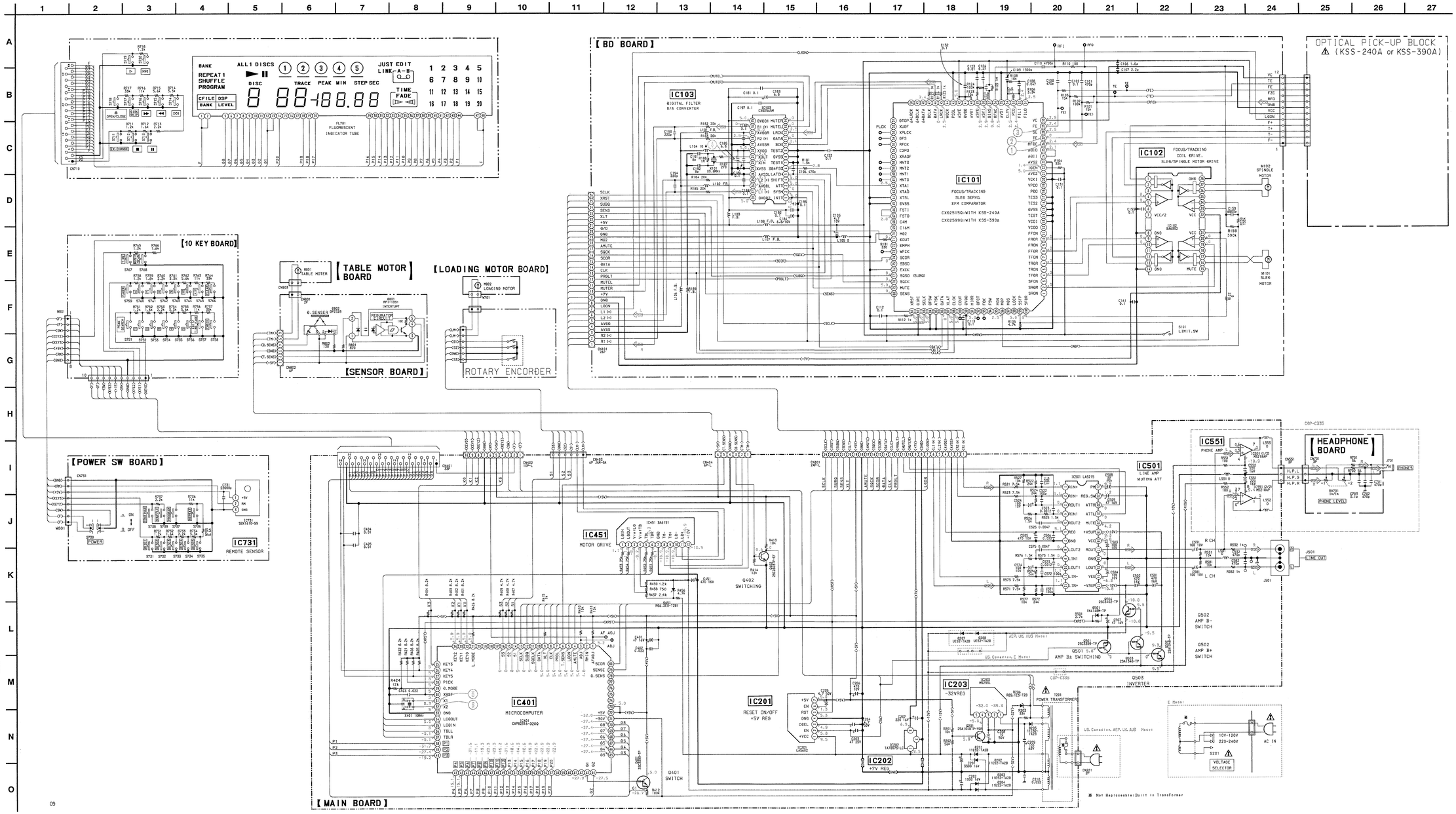
Note:

- ○— : parts extracted from the component side.
- ●— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- AUS model : Australian model



5-4. SCHEMATIC DIAGRAM

• See page 19, 20 for IC Block Diagrams.



Note on Schematic Diagram:

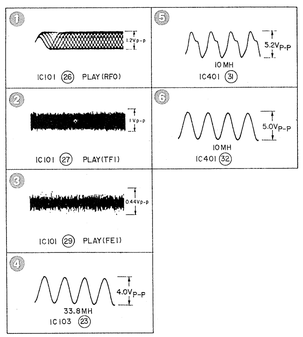
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safty. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

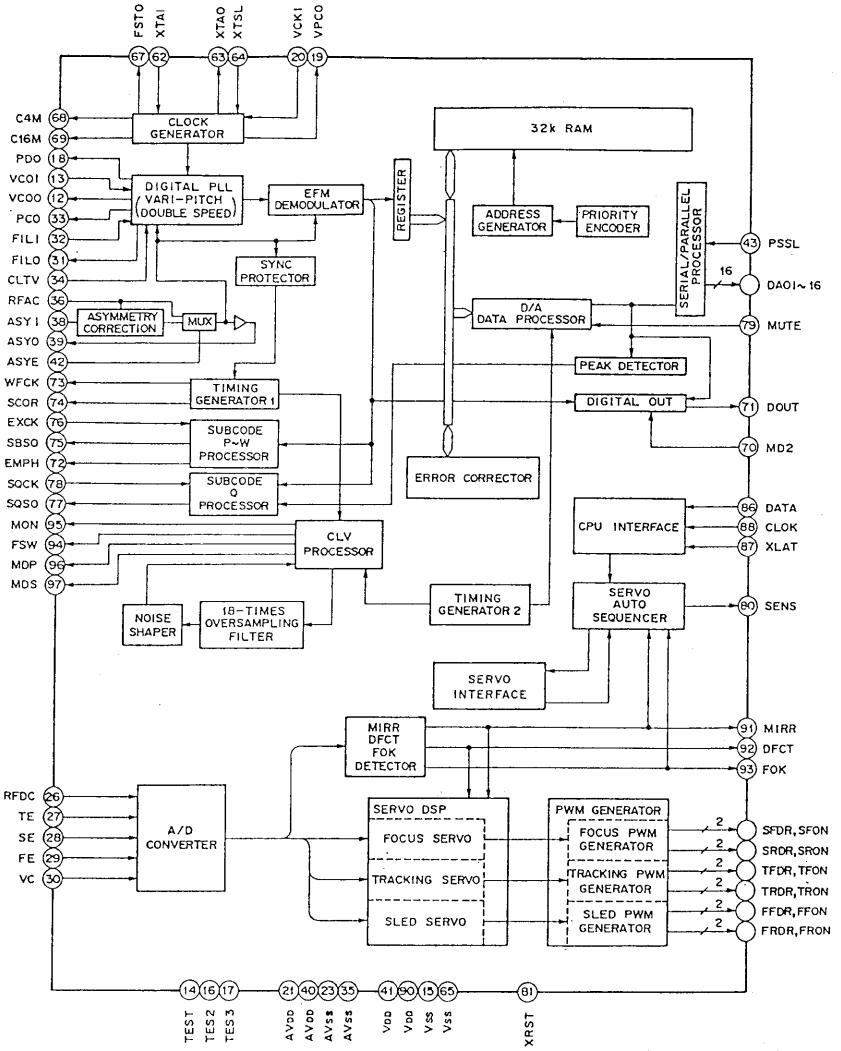
- : B+ line
- : B− line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10kΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- ⇨ : CD

- **AUS model : Australian model**

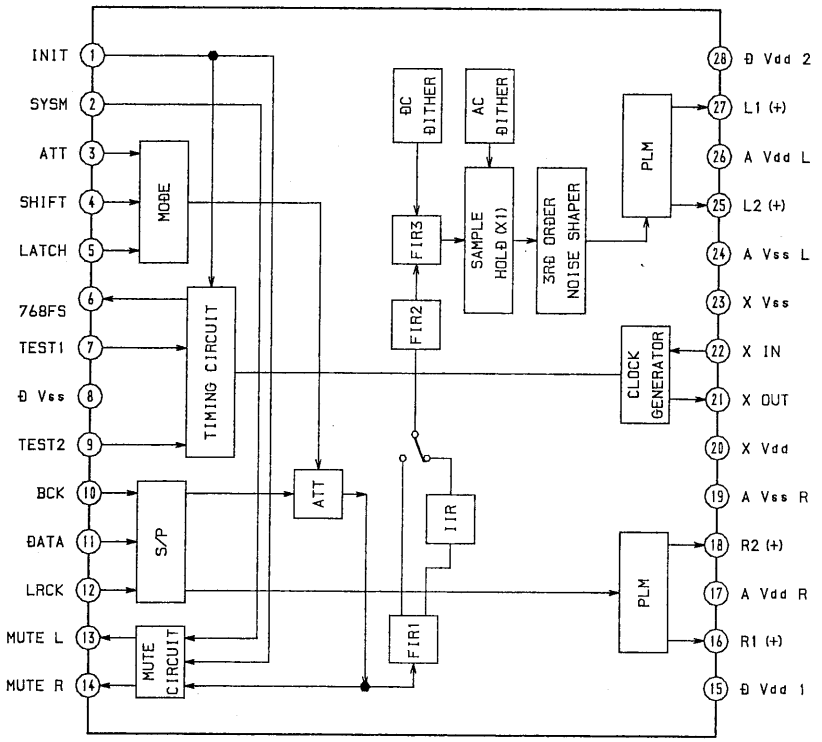

① 1Vp-p IC101 (26) PLAY(RFO)
② 1Vp-p IC101 (27) PLAY(TFI)
③ 0.44Vp-p IC101 (29) PLAY(FEI)
④ 4.0Vp-p 33.8MH IC103 (25)
⑤ 5.2Vp-p 10MH IC401 (9)
⑥ 5.0Vp-p 10MH IC401 (32)

5-5. IC BLOCK DIAGRAM

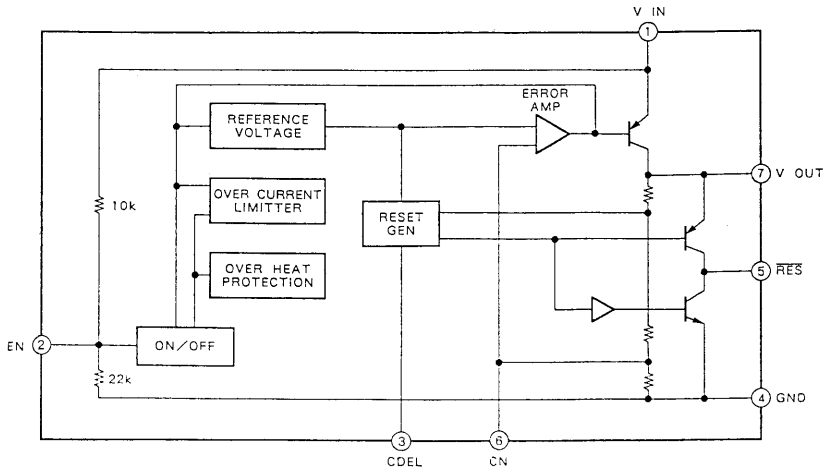
IC101 CXD2515Q/2599Q



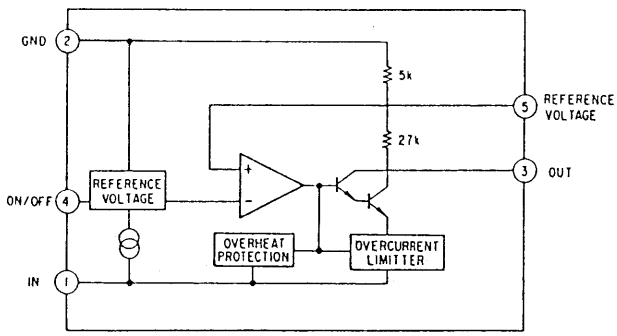
IC103 CXD2565M



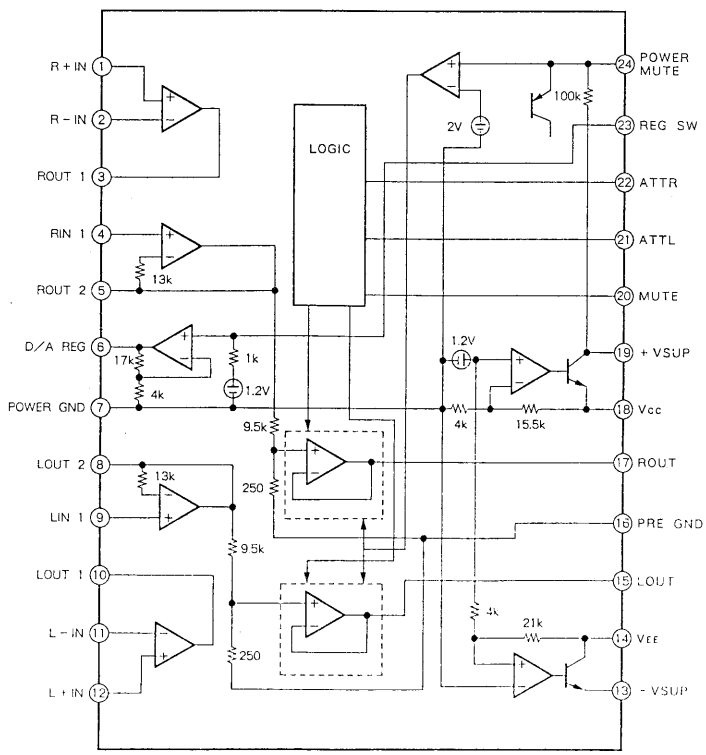
IC201 LA5602



IC203 M5293L



IC501 LA9215



SECTION 6
EXPLODED VIEWS

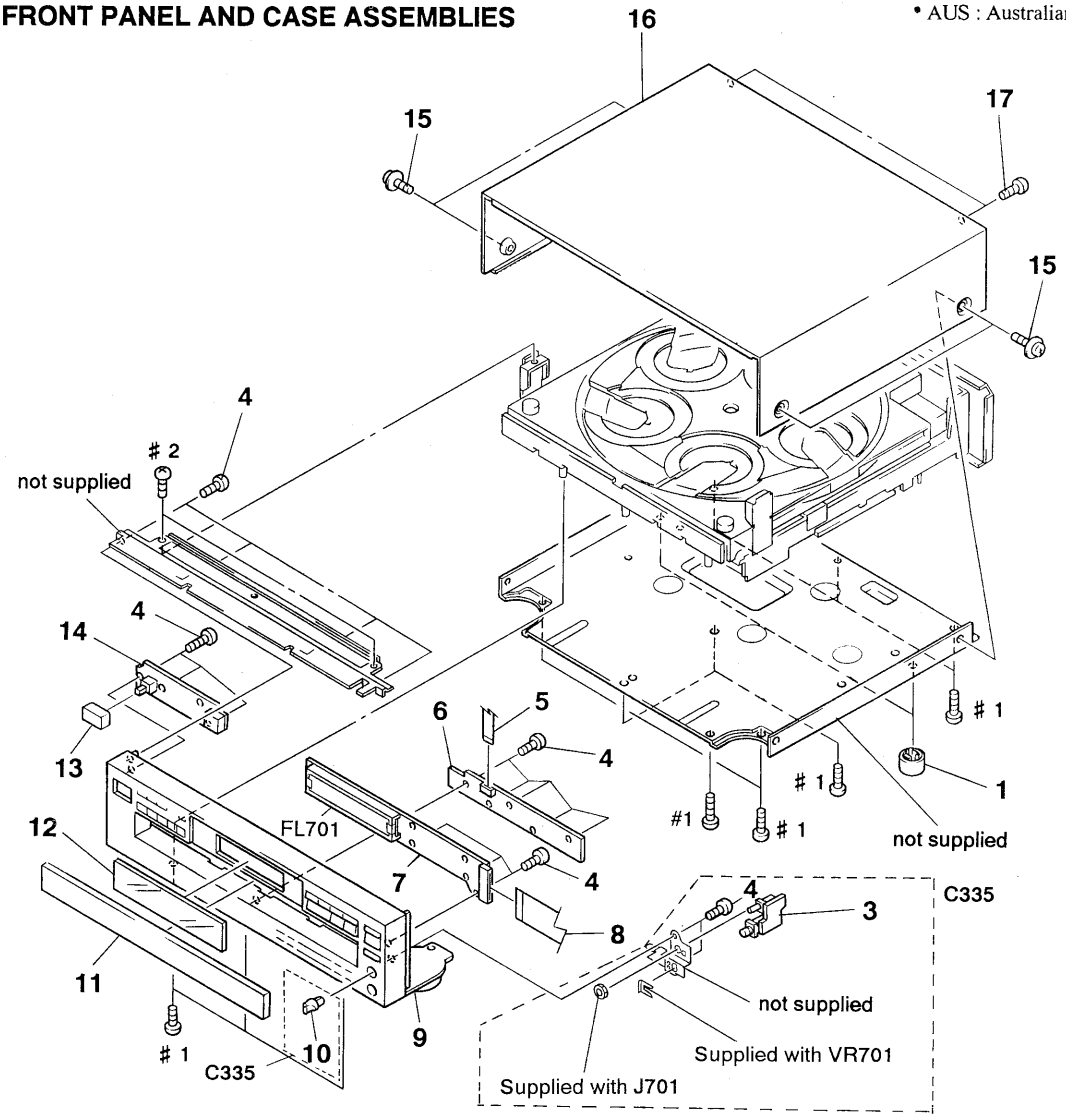
NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer què par une piéce portant le numéro spécifié.

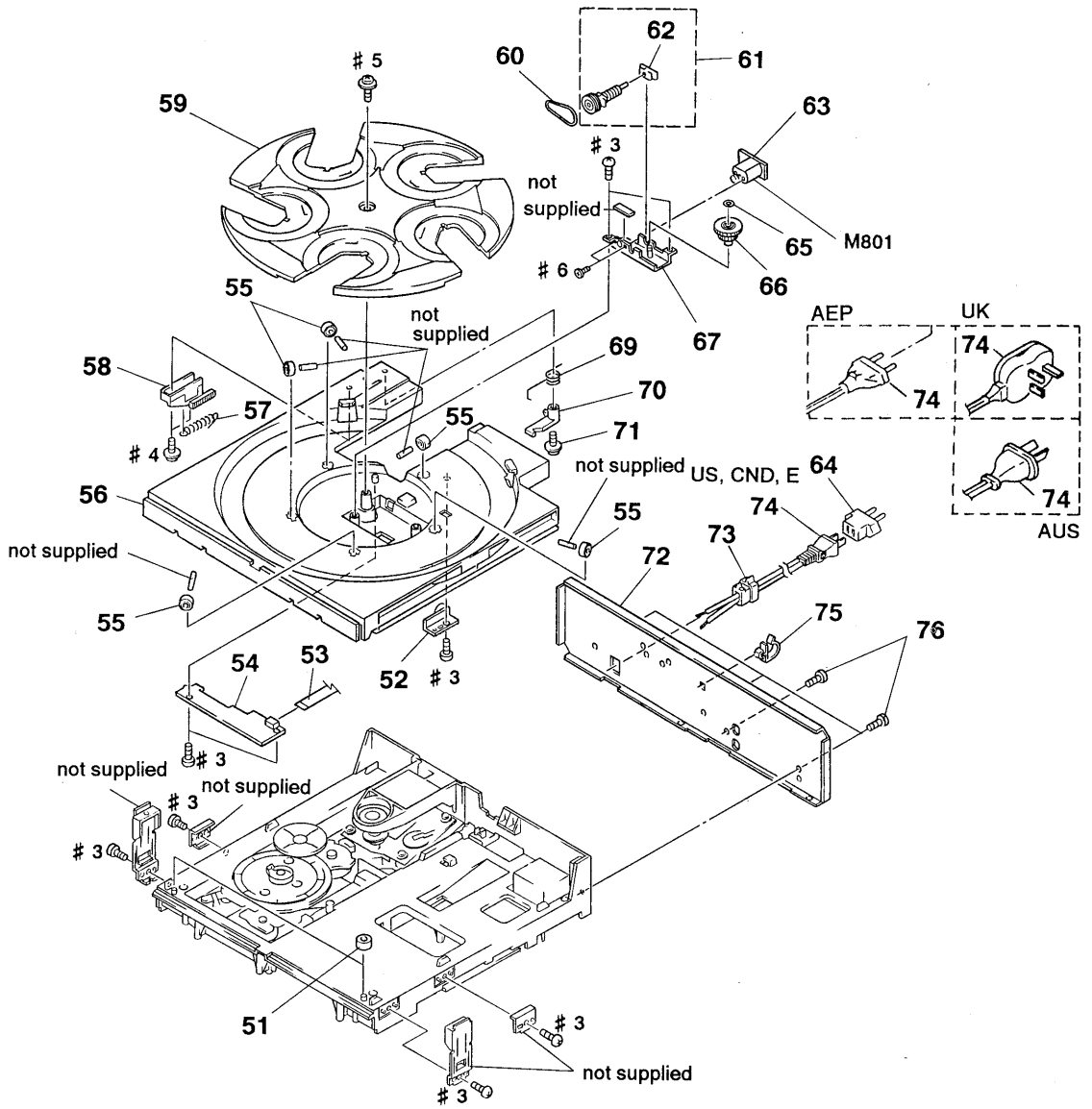
- CND : Canadian model
- AUS : Australian model

6-1. FRONT PANEL AND CASE ASSEMBLIES



Ref. No.	Part No.	Description	Remark
1	4-933-601-01	FOOT	
* 3	1-647-544-11	HEADPHONE BOARD (C335)	
4	4-951-620-01	SCREW (2.6X8), +BVTP	
5	1-751-054-11	WIRE (FLAT TYPE) (10 CORE)	
* 6	1-647-543-11	10 KEY BOARD	
* 7	A-4649-651-A	DISPLAY BOARD, COMPLETE	
8	1-751-053-11	WIRE (FLAT TYPE) (33 CORE)	
9	X-4943-506-1	PANEL ASSY, FRONT (C335:US, CND)	
9	X-4943-507-1	PANEL ASSY, FRONT (C335:AEP, UK, E)	
9	X-4943-510-1	PANEL ASSY, FRONT (C235:US, CND)	
9	X-4943-511-1	PANEL ASSY, FRONT (C235:AEP, AUS)	
10	4-950-189-01	KNOB (A) (VOL) (C335)	
11	4-957-557-01	PANEL, LOADING (C335)	
11	4-957-557-11	PANEL, LOADING (C235)	
12	4-957-548-01	PLATE (FL), INDICATION (C335)	
12	4-957-548-11	PLATE (FL), INDICATION (C235)	
13	4-922-921-01	BUTTON (POWER)	
* 14	1-647-542-11	POWER SW BOARD	
15	3-704-366-01	SCREW (CASE) (M3X8)	
* 16	4-944-153-01	CASE	
17	3-703-685-21	SCREW (+BV 3X8)	
FL701	1-517-164-11	INDICATOR TUBE, FLUORESCENT	

6-2. BACK PANEL AND DISC TABLE ASSEMBLIES

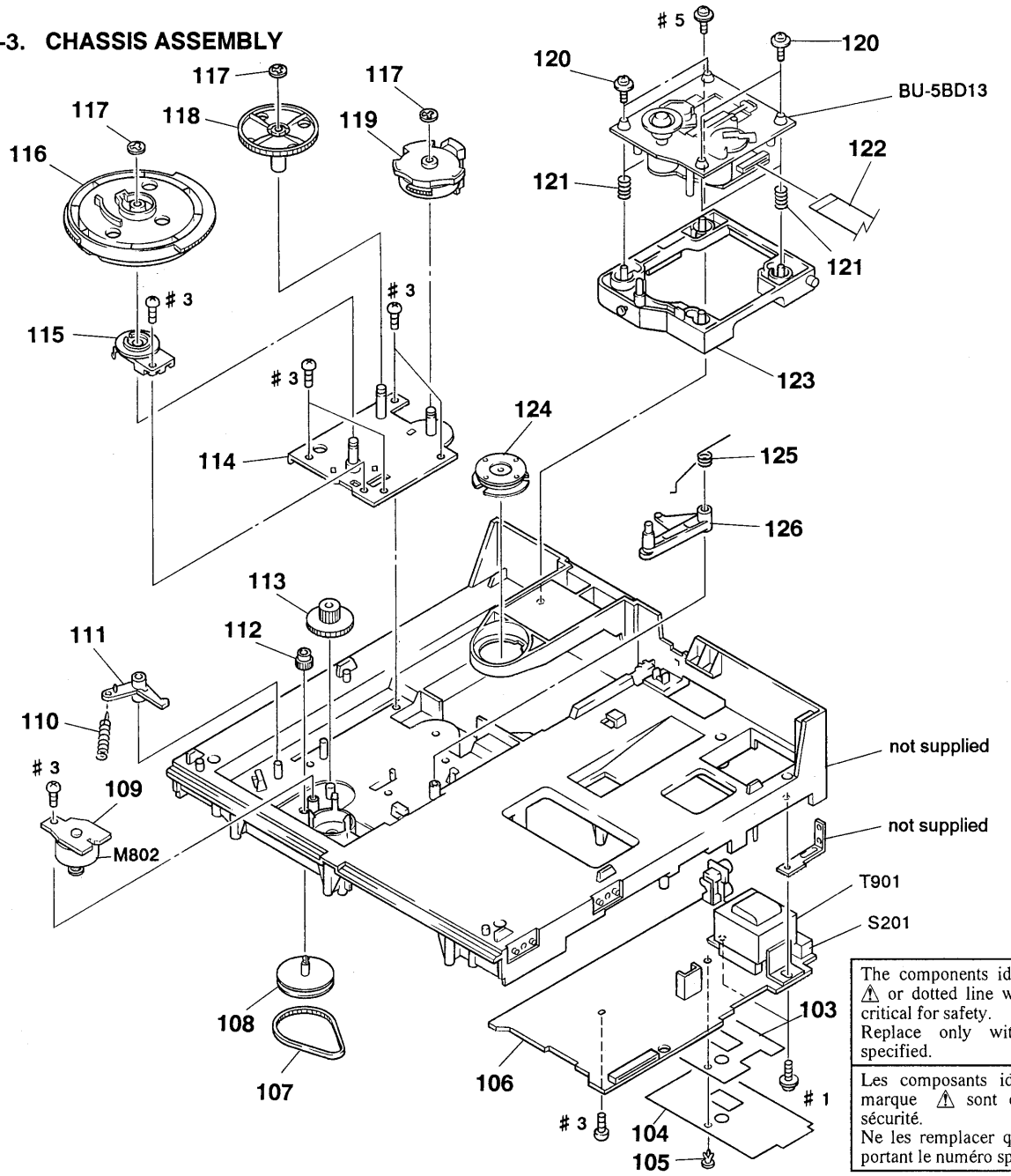


Ref. No.	Part No.	Description	Remark
51	4-951-619-01	CUSHION (A)	
52	X-4943-480-1	BRACKET (ROLLER D) ASSY	
53	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
* 54	1-647-362-11	SENSOR BOARD	
55	X-4924-457-1	ROLLER ASSY	
* 56	4-957-298-01	TABLE (A), DISC	
57	4-957-294-01	SPRING (D.T), TENSION	
58	4-957-292-01	SLIDER (RACK)	
59	4-957-299-01	TABLE (B), DISC	
60	4-957-304-01	BELT (RM)	
61	X-4943-479-1	GEAR (ROTARY A) ASSY	
62	4-957-278-01	BEARING (ROTARY A)	
63	1-647-364-11	TABLE MOTOR BOARD	
64	1-569-007-11	ADAPTER, CONVERSION 2P (C335:E)	
65	3-325-697-01	WASHER	
66	4-957-284-01	GEAR (LOTARY B)	
67	X-4943-477-1	BRACKET (RM) ASSY	
69	4-957-293-01	SPRING (RACK RELEASE)	
70	4-957-291-01	LEVER (RACK RELEASE)	

Ref. No.	Part No.	Description	Remark
71	4-957-868-01	SCREW (+PTPWH 2.6X20)	
* 72	4-957-560-01	PANEL, BACK (C335:US, CND)	
* 72	4-957-560-11	PANEL, BACK (C335:AEP)	
* 72	4-957-560-21	PANEL, BACK (C335:E)	
* 72	4-957-560-31	PANEL, BACK (C235:AUS)	
* 72	4-957-560-41	PANEL, BACK (C335:UK)	
* 72	4-957-560-51	PANEL, BACK (C235:US, CND)	
* 72	4-957-560-61	PANEL, BACK (C235:AEP)	
* 73	3-703-244-00	BUSHING (2104), CORD (EXCEPT FOR E)	
* 73	3-703-571-11	BUSHING (S) (4516), CORD (E)	
74	1-575-651-21	CORD, POWER (AEP)	
74	1-590-836-11	CORD, POWER (US, CND)	
74	1-696-027-11	CORD, POWER (E)	
74	1-696-571-11	CORD, POWER (UK)	
74	1-696-845-11	CORD, POWER (AUS)	
* 75	4-949-235-01	HOOK	
76	3-704-515-21	SCREW (BV/RING)	
M801	A-4660-322-A	MOTOR ASSY, ROTARY (TABLE)	

SEE ADDITIONAL INFORMATION

6-3. CHASSIS ASSEMBLY

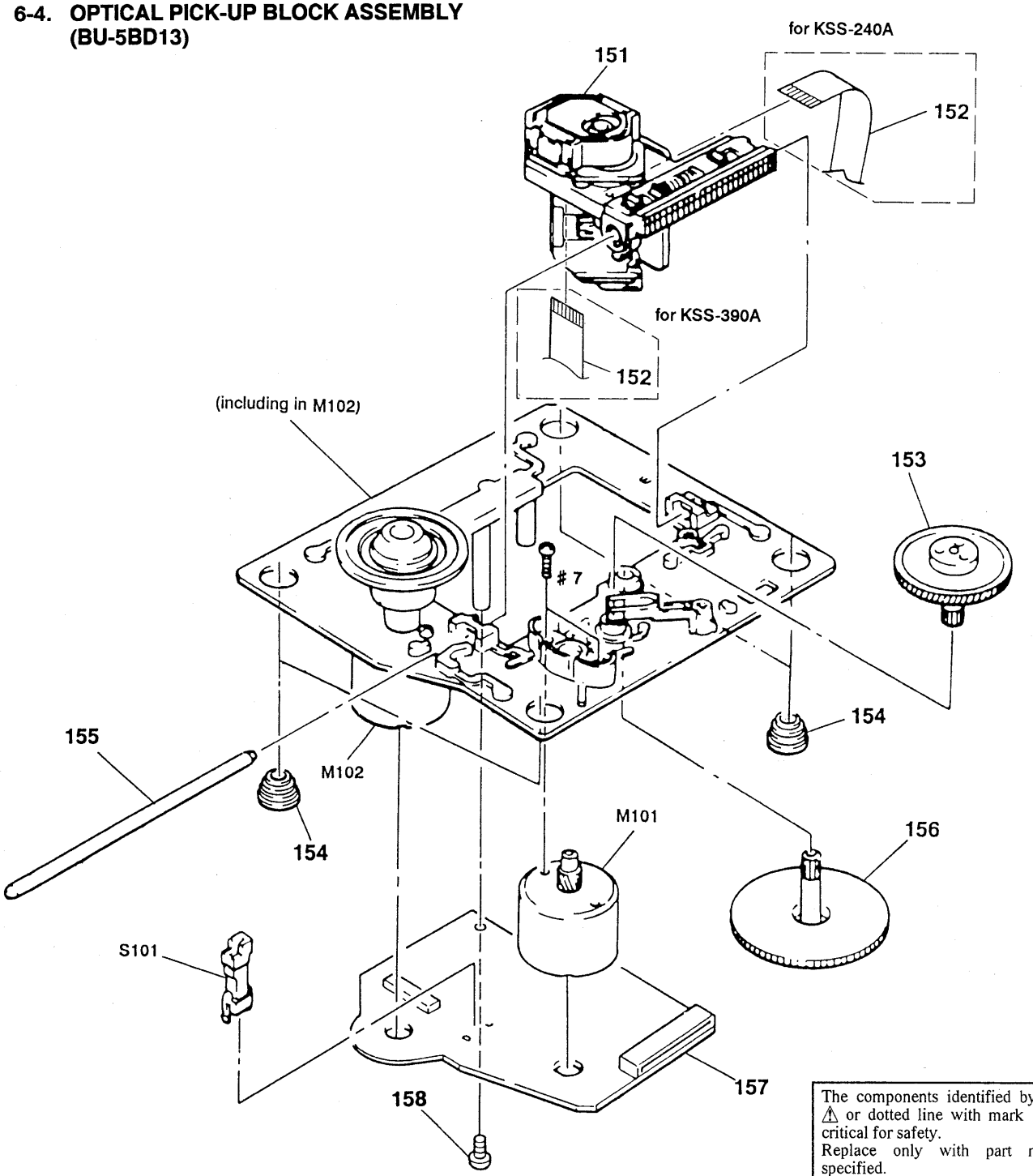


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 103	4-957-556-01	SHEET, INSULATING (AEP, AUS, UK)	
* 104	4-957-555-01	SHEET, INSULATING	
105	3-531-576-11	RIVET	
106	A-4649-649-A	MAIN BOARD, COMPLETE (C335:US, CND)	
106	A-4649-654-A	MAIN BOARD, COMPLETE (C335:AEP, UK)	
106	A-4649-655-A	MAIN BOARD, COMPLETE (C335:E)	
106	A-4649-656-A	MAIN BOARD, COMPLETE (C235:US, CND)	
106	A-4649-657-A	MAIN BOARD, COMPLETE (C235:AEP, AUS)	
107	4-944-490-01	BELT (TIMING)	
108	X-4941-529-1	PULLEY ASSY	
109	1-647-363-11	LOADING MOTOR BOARD	
110	4-924-412-01	SPRING (B), TENSION	
111	4-957-285-01	LEVER, SET	
112	4-934-375-01	GEAR (LOADING B)	
113	4-957-303-01	GEAR (LOADING C)	
114	X-4943-478-1	BRACKET (GEAR) ASSY	
115	1-466-996-11	ENCODER, ROTARY	
116	4-957-288-01	GEAR (MAIN)	
117	4-957-283-01	WASHER (5), STOPPER	
118	4-957-287-01	GEAR (REV)	
119	4-957-286-01	GEAR (U/D)	
120	4-933-134-01	SCREW (+PTPWH M2.6X6)	
121	4-958-593-01	SPRING (BU), COMPRESSION	
* 122	1-648-409-11	PC BOARD, FLEXIBLE	
* 123	4-957-289-01	HOLDER (BU)	
* 124	1-452-538-11	MAGNET	
125	4-957-281-01	SPRING (LOCK LEVER)	
126	4-957-279-01	LEVER, LOCK	
M802	A-4604-834-A	MOTOR ASSY, LOADING	
⚠S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (E)	
⚠T901	1-423-553-11	TRANSFORMER, POWER (US, CND)	
⚠T901	1-423-554-11	TRANSFORMER, POWER (AEP, AUS, UK)	
⚠T901	1-423-555-11	TRANSFORMER, POWER (E)	

6-4. OPTICAL PICK-UP BLOCK ASSEMBLY (BU-5BD13)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠151	8-848-144-11	DEVICE, OPTICAL KSS-240A	
⚠151	8-848-281-11	DEVICE, OPTICAL KSS-390A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE) (for KSS-240A)	
152	1-647-341-11	PC BOARD, FLEXIBLE(for KSS-390A)	
153	4-917-567-01	GEAR (M)	
154	4-951-940-01	INSULATOR (BU)	
155	4-917-565-01	SHAFT, SLED	
156	4-917-564-01	GEAR (P), FLATNESS	
* 157	A-4649-610-A	BD BOARD, COMPLETE	
158	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
S101	1-572-085-11	SWITCH, LEAF	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- CND : Canadian model
- AUS : Australian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Hardware (# mark) list is given in the last of this parts list.

Ref.No.	Part No.	Description	Remark
*	1-647-543-11	10 KEY BOARD	
		**********	
		< CONNECTOR >	
CN751	1-750-228-11	CONNECTOR, FFC(LIGHT ANGLE)10P	
		< RESISTOR >	
R751	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R752	1-247-836-11	CARBON 1.6K 5% 1/4W	
R753	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R754	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R755	1-249-426-11	CARBON 5.6K 5% 1/4W	
R756	1-247-856-00	CARBON 11K 5% 1/4W	
R757	1-249-435-11	CARBON 33K 5% 1/4W	
R758	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R759	1-247-836-11	CARBON 1.6K 5% 1/4W	
R760	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R761	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R762	1-249-426-11	CARBON 5.6K 5% 1/4W	
R763	1-247-856-00	CARBON 11K 5% 1/4W	
R764	1-249-435-11	CARBON 33K 5% 1/4W	
R765	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R766	1-247-836-11	CARBON 1.6K 5% 1/4W	
		< SWITCH >	
S751	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
S752	1-554-303-21	SWITCH, TACTILE (1)	
S753	1-554-303-21	SWITCH, TACTILE (2)	
S754	1-554-303-21	SWITCH, TACTILE (3)	
S755	1-554-303-21	SWITCH, TACTILE (4)	
S756	1-554-303-21	SWITCH, TACTILE (5)	
S757	1-554-303-21	SWITCH, TACTILE (EDIT)	
S758	1-554-303-21	SWITCH, TACTILE (CHECK)	
S759	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S760	1-554-303-21	SWITCH, TACTILE (6)	
S761	1-554-303-21	SWITCH, TACTILE (7)	
S762	1-554-303-21	SWITCH, TACTILE (8)	
S763	1-554-303-21	SWITCH, TACTILE (9)	
S764	1-554-303-21	SWITCH, TACTILE (10)	
S765	1-554-303-21	SWITCH, TACTILE (>10)	
S766	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S767	1-554-303-21	SWITCH, TACTILE (TIME)	
S768	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	

Ref.No.	Part No.	Description	Remark
**********			
*	A-4649-651-A	DISPLAY BOARD, COMPLETE	
		**********	
		< CONNECTOR >	
CN710	1-750-237-21	CONNECTOR, FFC(LIGHT ANGLE)33P	
		< INDICATOR TUBE >	
FL701	1-517-164-11	INDICATOR TUBE, FLUORESCENT	
		< RESISTOR >	
R711	1-249-418-11	CARBON 1.2K 5% 1/4W F	
R712	1-247-836-11	CARBON 1.6K 5% 1/4W	
R713	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R714	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R715	1-249-426-11	CARBON 5.6K 5% 1/4W	
R716	1-247-856-00	CARBON 11K 5% 1/4W	
R717	1-249-435-11	CARBON 33K 5% 1/4W	
R718	1-249-418-11	CARBON 1.2K 5% 1/4W F	
		< SWITCH >	
S711	1-554-303-21	SWITCH, TACTILE (EX-CHANGE)	
S712	1-554-303-21	SWITCH, TACTILE (■)	
S713	1-554-303-21	SWITCH, TACTILE (▮▮)	
S714	1-554-303-21	SWITCH, TACTILE (=)	
S715	1-554-303-21	SWITCH, TACTILE (◀◀)	
S716	1-554-303-21	SWITCH, TACTILE (▶▶)	
S717	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	
S718	1-554-303-21	SWITCH, TACTILE (= OPEN/CLOSE)	
S719	1-554-303-21	SWITCH, TACTILE (=)	
S720	1-554-303-21	SWITCH, TACTILE (=)	
**********			
*	1-647-544-11	HEADPHONE BOARD (C335 only)	
		**********	
		< CAPACITOR >	
C701	1-162-290-31	CERAMIC 470PF 10% 50V	
C702	1-162-290-31	CERAMIC 470PF 10% 50V	
C703	1-164-159-11	CERAMIC 0.1uF 50V	

HEADPHONE | LOADING MOTOR | MAIN

Ref.No.	Part No.	Description				Remark
		< JACK >				
J701	1-750-162-41	JACK (LARGE TYPE) (PHONES)				
		< RESISTOR >				
R701	1-249-402-11	CARBON	56	5%	1/4W F	
R702	1-249-402-11	CARBON	56	5%	1/4W F	
		< VARIABLE RESISTOR >				
RV701	1-223-359-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)				
**********						
*	1-647-363-11	LOADING MOTOR BOARD				
		**********				
**********						
*	A-4649-656-A	MAIN BOARD, COMPLETE (C235:US, CND)				
		**********				
*	A-4649-657-A	MAIN BOARD, COMPLETE (C235:AEP, AUS)				
		**********				
*	A-4649-649-A	MAIN BOARD, COMPLETE (C335:US, CND)				
		**********				
*	A-4649-654-A	MAIN BOARD, COMPLETE (C335:AEP, UK)				
		**********				
*	A-4649-655-A	MAIN BOARD, COMPLETE (C335:E)				
		**********				
	7-685-871-01	SCREW +BVTT 3X6 (S)				
		< CAPACITOR >				
C201	1-124-887-00	ELECT	3300uF	20%	16V	
C202	1-124-360-00	ELECT	1000uF	20%	16V	
C203	1-124-910-11	ELECT	47uF	20%	50V	
C204	1-126-163-11	ELECT	4.7uF	20%	50V	
C205	1-126-163-11	ELECT	4.7uF	20%	50V	
C206	1-124-997-11	ELECT	470uF	20%	10V	
C207	1-126-024-11	ELECT	220uF	20%	16V	
C208	1-126-059-11	ELECT	10uF	20%	50V	
C209	1-124-572-11	ELECT	100uF	20%	63V	
C210	1-161-494-00	CERAMIC	0.022uF		25V	
C401	1-126-022-11	ELECT	47uF	20%	16V	
C402	1-161-494-00	CERAMIC	0.022uF		25V	
C403	1-161-494-00	CERAMIC	0.022uF		25V	
C404	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C405	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C451	1-126-012-11	ELECT	470uF	20%	16V	
C501	1-126-012-11	ELECT	470uF	20%	16V	
C502	1-126-012-11	ELECT	470uF	20%	16V	
C503	1-124-994-11	ELECT	100uF	20%	10V	
C504	1-124-994-11	ELECT	100uF	20%	10V	
C505	1-124-997-11	ELECT	470uF	20%	10V	
C506	1-161-494-00	CERAMIC	0.022uF		25V	
C507	1-126-022-11	ELECT	47uF	20%	16V	
C508	1-126-788-91	ELECT	22uF	20%	25V	
C509	1-126-786-11	ELECT	47uF	20%	16V	
C521	1-162-282-31	CERAMIC	100PF	10%	50V	
C522	1-162-282-31	CERAMIC	100PF	10%	50V	
C523	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C524	1-124-994-11	ELECT	100uF	20%	10V	
C525	1-106-359-00	MYLAR	4700PF	5%	200V	
C531	1-124-994-11	ELECT	100uF	20%	10V	
C532	1-130-467-00	MYLAR	470PF	5%	50V	
C551	1-126-024-11	ELECT	220uF	20%	16V	(C335)
C552	1-126-024-11	ELECT	220uF	20%	16V	(C335)
C571	1-162-282-31	CERAMIC	100PF	10%	50V	
C572	1-162-282-31	CERAMIC	100PF	10%	50V	
C573	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C574	1-124-994-11	ELECT	100uF	20%	10V	
C575	1-106-359-00	MYLAR	4700PF	5%	200V	
C581	1-124-994-11	ELECT	100uF	20%	10V	
C582	1-130-467-00	MYLAR	470PF	5%	50V	
		< CONNECTOR >				
* CN201	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P				
CN301	1-750-236-11	CONNECTOR, FFC(LIGHT ANGLE)24P				
CN401	1-750-237-11	CONNECTOR, FFC(LIGHT ANGLE)33P				
CN402	1-750-228-11	CONNECTOR, FFC(LIGHT ANGLE)10P				
* CN403	1-695-006-11	PIN, CONNECTOR (PC BOARD) 6P				
CN404	1-750-223-11	CONNECTOR, FFC(STRAIGHT TYPE)6P				
* CN551	1-568-941-11	PIN, CONNECTOR 3P (C335)				
		< DIODE >				
D201	8-719-200-82	DIODE	1ES2			
D202	8-719-200-82	DIODE	1ES2			
D203	8-719-200-82	DIODE	1ES2			
D204	8-719-200-82	DIODE	1ES2			
D205	8-719-200-82	DIODE	1ES2			
D206	8-719-110-13	DIODE	RD9.1ES-B2			
D207	8-719-200-82	DIODE	1ES2 (C235:AEP, AUS/C335:AEP, UK)			
D208	8-719-200-82	DIODE	1ES2 (C235:AEP, AUS/C335:AEP, UK)			
D451	8-719-012-99	DIODE	UZ-6.2BSA-TP			
D451	8-719-109-92	DIODE	RD6.2ES-B1			
D451	8-719-947-24	DIODE	MTZJ-T-72-6.2A			
D501	8-719-987-63	DIODE	1N4148M			
		< IC >				
IC201	8-759-061-65	IC	LA5602			

Ref.No.	Part No.	Description	Remark
IC202	8-759-605-00	IC M5F78M07	
IC203	8-759-633-42	IC M5293L	
IC401	8-752-843-25	IC CXP82316-020Q	
IC451	8-759-172-31	IC BA6191	
IC501	8-759-061-66	IC LA9215	
IC551	8-759-634-51	IC M5218AP (C335)	
		< JACK >	
J501	1-750-679-11	JACK, PIN 2P (LINE OUT)	
		< COIL >	
L501	1-412-473-21	INDUCTOR 0uH	
L551	1-412-473-21	INDUCTOR 0uH (C335)	
L552	1-412-473-21	INDUCTOR 0uH (C335)	
L553	1-412-473-21	INDUCTOR 0uH (C335)	
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q401	8-729-900-89	TRANSISTOR DTC144ES	
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-900-89	TRANSISTOR DTC144ES	
Q502	8-729-900-61	TRANSISTOR DTA114ES	
Q503	8-729-900-61	TRANSISTOR DTA114ES	
Q504	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-438-11	CARBON 56K 5% 1/4W	
R203	1-249-435-11	CARBON 33K 5% 1/4W	
R401	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R402	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R403	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R404	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R405	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R406	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R407	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R408	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R409	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R410	1-249-429-11	CARBON 10K 5% 1/4W	
R411	1-249-429-11	CARBON 10K 5% 1/4W	
R412	1-249-441-11	CARBON 100K 5% 1/4W	
R413	1-249-429-11	CARBON 10K 5% 1/4W	
R414	1-249-430-11	CARBON 12K 5% 1/4W	
R415	1-249-417-11	CARBON 1K 5% 1/4W	F
R421	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R422	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R424	1-249-430-11	CARBON 12K 5% 1/4W	
R426	1-249-428-11	CARBON 8.2K 5% 1/4W	F
R451	1-247-876-11	CARBON 75K 5% 1/4W	
R452	1-247-876-11	CARBON 75K 5% 1/4W	
R453	1-247-876-11	CARBON 75K 5% 1/4W	
R454	1-247-876-11	CARBON 75K 5% 1/4W	
R456	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R457	1-247-840-00	CARBON 2.4K 5% 1/4W	F
R458	1-247-828-11	CARBON 750 5% 1/4W	F
R459	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R501	1-249-422-11	CARBON 2.7K 5% 1/4W	F
R521	1-247-852-11	CARBON 7.5K 5% 1/4W	
R522	1-247-864-11	CARBON 24K 5% 1/4W	
R523	1-247-852-11	CARBON 7.5K 5% 1/4W	
R524	1-247-864-11	CARBON 24K 5% 1/4W	
R525	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R526	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R527	1-249-429-11	CARBON 10K 5% 1/4W	
R531	1-249-429-11	CARBON 10K 5% 1/4W	
R532	1-249-417-11	CARBON 1K 5% 1/4W	F
R551	1-249-405-11	CARBON 100 5% 1/4W	F (C335)
R552	1-249-405-11	CARBON 100 5% 1/4W	F (C335)
R571	1-247-852-11	CARBON 7.5K 5% 1/4W	
R572	1-247-864-11	CARBON 24K 5% 1/4W	
R573	1-247-852-11	CARBON 7.5K 5% 1/4W	
R574	1-247-864-11	CARBON 24K 5% 1/4W	
R575	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R576	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R577	1-249-429-11	CARBON 10K 5% 1/4W	
R581	1-249-429-11	CARBON 10K 5% 1/4W	
R582	1-249-417-11	CARBON 1K 5% 1/4W	F
		< SWITCH >	
⚠S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (C335:E)	
		< VIBRATOR >	
X401	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	
**********			
*	A-4649-610-A	BD BOARD, COMPLETE	
		**********	
		< CAPACITOR >	
C101	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C102	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C103	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
C105	1-135-155-21	TANTALUM CHIP 4.7uF 10% 16V	
C106	1-164-346-11	CERAMIC CHIP 1uF 16V	
C107	1-164-505-11	CERAMIC CHIP 2.2uF 16V	
C108	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
C109	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
C110	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

BD POWER SW

Ref.No.	Part No.	Description				Remark
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V	
C131	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C132	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C133	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C182	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C183	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V	
C184	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V	
C185	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V	
C186	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C187	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C188	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C191	1-163-091-00	CERAMIC CHIP	8PF		50V	
C192	1-163-091-00	CERAMIC CHIP	8PF		50V	
C193	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C194	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C195	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C196	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C197	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
		< CONNECTOR >				
* CN101	1-580-875-11	SOCKET, CONNECTOR (SMT) 26P				
CN102	1-580-866-11	SOCKET, CONNECTOR (SMT) 12P				
		< IC >				
IC101	8-752-351-94	IC CXD2515Q (for KSS-240A)				
IC101	8-752-360-75	IC CXD2599Q (for KSS-390A)				
IC102	8-759-164-29	IC BA6392FP-T1				
IC103	8-752-355-45	IC CXD2565M-T6				
		< COIL >				
L101	1-414-234-21	INDUCTOR, FERRITE BEAD				
L102	1-414-234-21	INDUCTOR, FERRITE BEAD				
L103	1-414-234-21	INDUCTOR, FERRITE BEAD				
L104	1-216-001-00	METAL CHIP	10	5%	1/10W	
L105	1-216-295-00	METAL CHIP	0	5%	1/10W	
L106	1-414-234-21	INDUCTOR, FERRITE BEAD				
L107	1-414-234-21	INDUCTOR, FERRITE BEAD				
L108	1-414-234-21	INDUCTOR, FERRITE BEAD				

Ref.No.	Part No.	Description				Remark
		< RESISTOR >				
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R105	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R109	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R110	1-216-025-00	METAL CHIP	100	5%	1/10W	
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R122	1-216-295-00	METAL CHIP	0	5%	1/10W	
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R124	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R126	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R127	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R131	1-216-037-00	METAL CHIP	330	5%	1/10W	
R158	1-216-111-00	METAL CHIP	390K	5%	1/10W	
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R181	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R182	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R183	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R184	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R185	1-216-080-00	METAL CHIP	20K	5%	1/10W	
R187	1-216-035-00	METAL CHIP	270	5%	1/10W	
R188	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R189	1-414-234-21	INDUCTOR, FERRITE BEAD				
		< SWITCH >				
S101	1-572-085-11	SWITCH, LEAF (LIMIT)				
		< VIBRATOR >				
X101	1-579-904-21	VIBRATOR, CRYSTAL (33.8MHz)				

****

*	1-647-542-11	POWER SW BOARD				
		**********				
		< CAPACITOR >				
C731	1-161-494-00	CERAMIC	0.022uF		25V	
		< IC >				
IC731	8-741-100-48	IC SBX1610-59				
		< RESISTOR >				
R731	1-249-418-11	CARBON	1.2K	5%	1/4W F	

Ref. No.	Part No.	Description				Remark
R732	1-247-836-11	CARBON	1.6K	5%	1/4W	
R733	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R734	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R735	1-249-426-11	CARBON	5.6K	5%	1/4W	
R736	1-247-856-00	CARBON	11K	5%	1/4W	
R737	1-249-421-11	CARBON	2.2K	5%	1/4W	F
		< SWITCH >				
S730	1-572-714-11	SWITCH, PUSH (POWER)				
S731	1-554-303-21	SWITCH, TACTILE (DISC 1)				
S732	1-554-303-21	SWITCH, TACTILE (DISC 2)				
S733	1-554-303-21	SWITCH, TACTILE (DISC 3)				
S734	1-554-303-21	SWITCH, TACTILE (DISC 4)				
S735	1-554-303-21	SWITCH, TACTILE (DISC 5)				
S736	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S737	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S738	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S739	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
**********						
*	1-647-362-11	SENSOR BOARD				
		**********				
		< CONNECTOR >				
CN801	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P				
CN802	1-750-243-11	SOCKET, CONNECTOR 6P				
		< DIODE >				
D801	8-749-924-18	DIODE IC RPI-1391				
D802	8-749-924-30	DIODE PHOTO SENSOR GP2S28				
		< RESISTOR >				
R801	1-249-416-11	CARBON	820	5%	1/4W	F
R802	1-249-406-11	CARBON	120	5%	1/4W	F
**********						
		MISCELLANEOUS				
		**********				
5	1-751-054-11	WIRE (FLAT TYPE) (10 CORE)				
8	1-751-053-11	WIRE (FLAT TYPE) (33 CORE)				
53	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)				
64	1-569-007-11	ADAPTER, CONVERSION 2P (C335:E)				
⚠74	1-575-651-21	CORD, POWER (AEP)				
⚠74	1-590-836-11	CORD, POWER (US, CND)				
⚠74	1-696-027-11	CORD, POWER (E)				
⚠74	1-696-571-11	CORD, POWER (UK)				
⚠74	1-696-845-11	CORD, POWER (AUS)				
115	1-466-996-11	ENCODER, ROTARY				
* 122	1-648-409-11	PC BOARD, FLEXIBLE				
* 124	1-452-538-11	MAGNET				

Ref. No.	Part No.	Description	Remark
⚠151	8-848-144-11	DEVICE, OPTICAL KSS-240A	
⚠151	8-848-281-11	DEVICE, OPTICAL KSS-390A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE) (for KSS-240A)	
152	1-647-341-11	PC BOARD, FLEXIBLE (for KSS-390A)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M801	A-4660-322-A	MOTOR ASSY, ROTARY (TABLE)	
M802	A-4604-834-A	MOTOR ASSY, LOADING	
⚠T901	1-423-553-11	TRANSFORMER, POWER (US, CND)	
⚠T901	1-423-554-11	TRANSFORMER, POWER (AEP, AUS, UK)	
⚠T901	1-423-555-11	TRANSFORMER, POWER (E)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-123-11	REMOTE COMMANDER (RM-D335) (C335)	
	1-558-271-11	CORD, CONNECTION	
	3-756-520-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, UK, E)	
	3-756-520-21	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AUS)	
	3-756-520-31	MANUAL, INSTRUCTION (FRENCH) (CND)	
	3-756-520-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
	3-756-520-61	MANUAL, INSTRUCTION (DANISH, FINNISH, SWEDISH, ENGLISH) (AEP)	
*	4-944-110-01	CUSHION (FRONT)	
*	4-944-111-01	CUSHION (REAR)	
*	4-958-473-01	INDIVIDUAL CARTON (C235)	
*	4-958-474-01	INDIVIDUAL CARTON (C335)	
	4-959-044-01	COVER, BATTERY (for RM-D335) (C335)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW, TAPPING	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#4	7-685-134-19	SCREW +PTPWH 2.6X8 (TYPE2)	
#5	7-685-648-79	SCREW (M3X12), TAPPING	
#6	7-621-772-00	SCREW +B 2X3	
#7	7-621-255-15	SCREW +P 2X3	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

9-957-757-11

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Audio Group

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CDP-C235/C335

SONY

SERVICE MANUAL

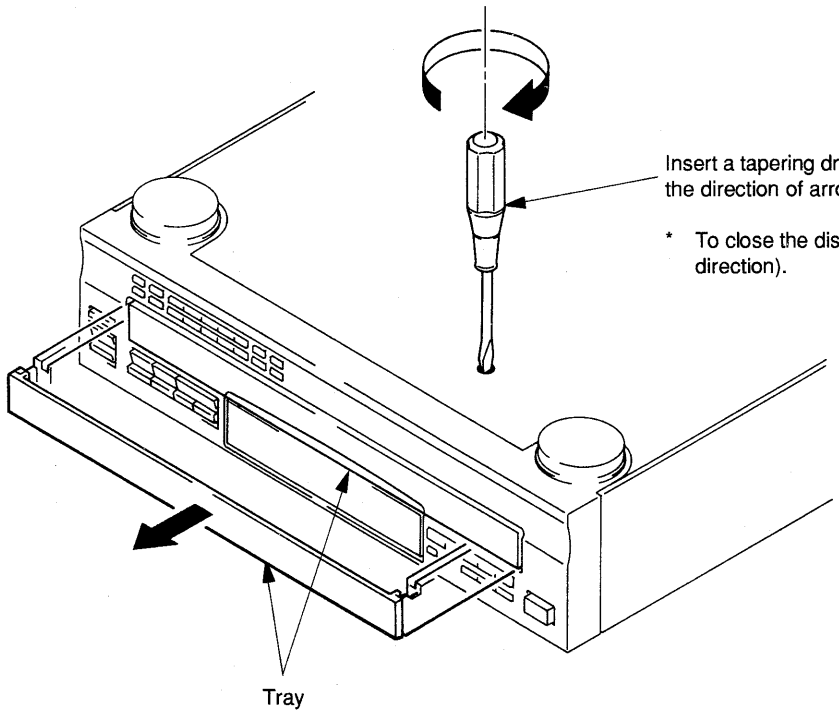
US Model
Canadian Model
AEP Model
CDP-C235/335
Australian Model
CDP-C235
UK Model
E Model
CDP-C335

SUPPLEMENT-1

File this Supplement with the Service Manual.

Subject :
- **How to open the Disc tray when Power switch turns off.**
- **Block Diagram**
- **IC Block Diagram**
- **Correction**

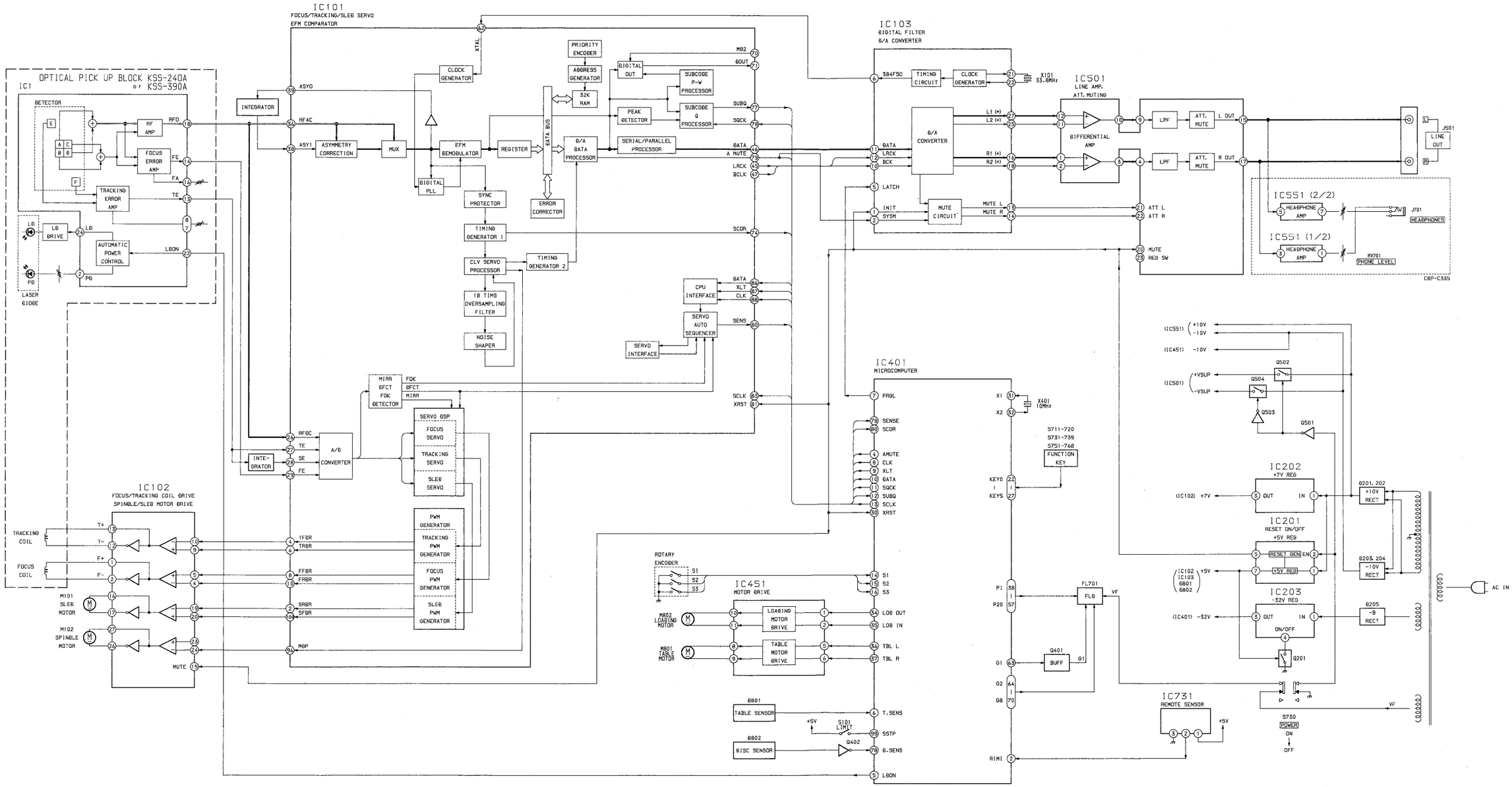
HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).

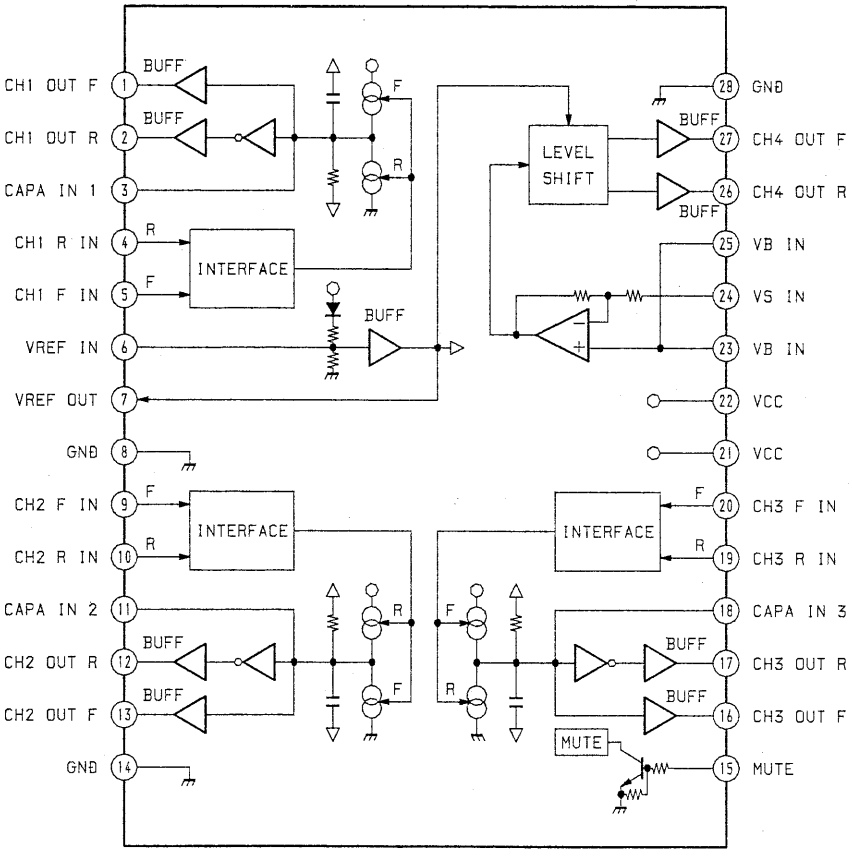
* To close the disc tray, turn the driver in the reverse direction (to IN direction).

• BLOCK DIAGRAM

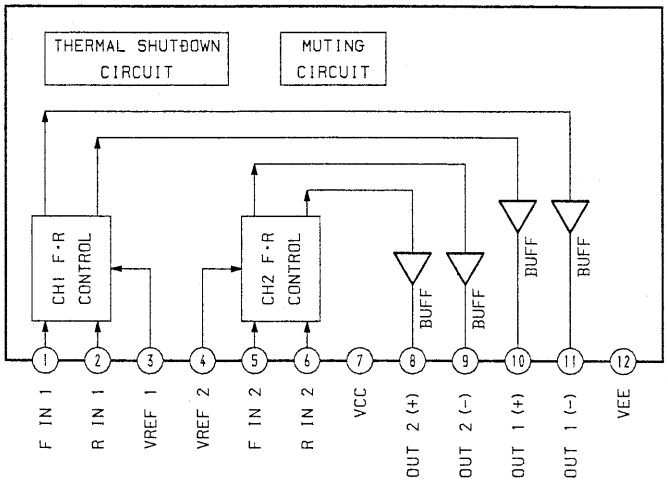


• IC BLOCK DIAGRAM

IC102 BA6392FP

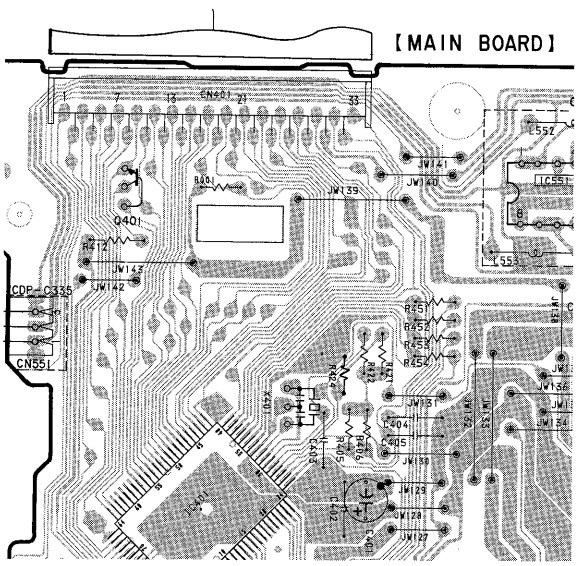
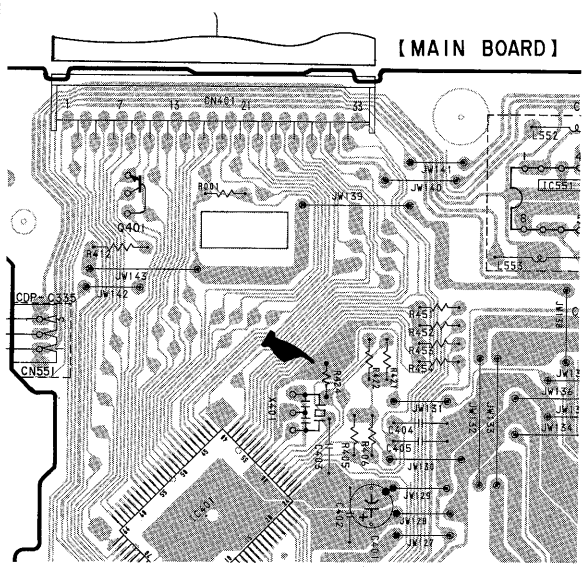
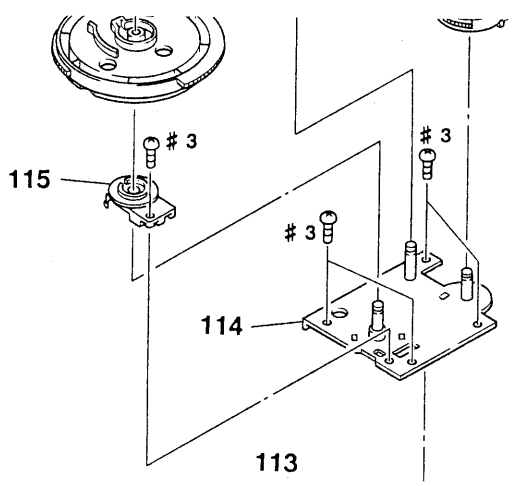
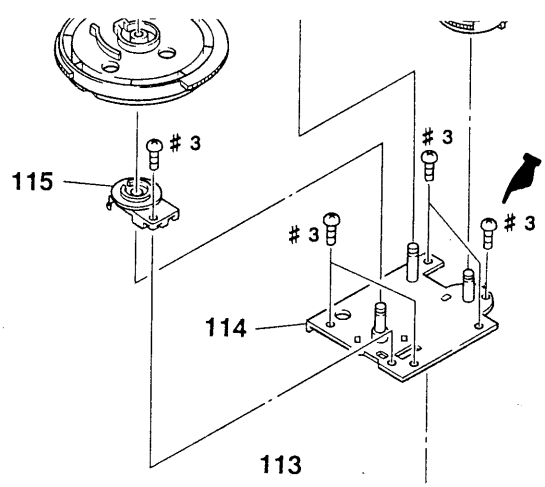


IC451 BA6191



CORRECTION

☛ : Corrected portion

Page	Incorrect	Correct
13		
23		
	121 4-958-593-01 SPRING (BU), COMPRESSION	121 4-948-503-01 SPRING (BU), COMPRESSION

English
93E0998-1
Printed in Japan
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CDP-C235/C335

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
CDP-C235/C335
Australian Model
CDP-C235
UK Model
E Model
CDP-C335

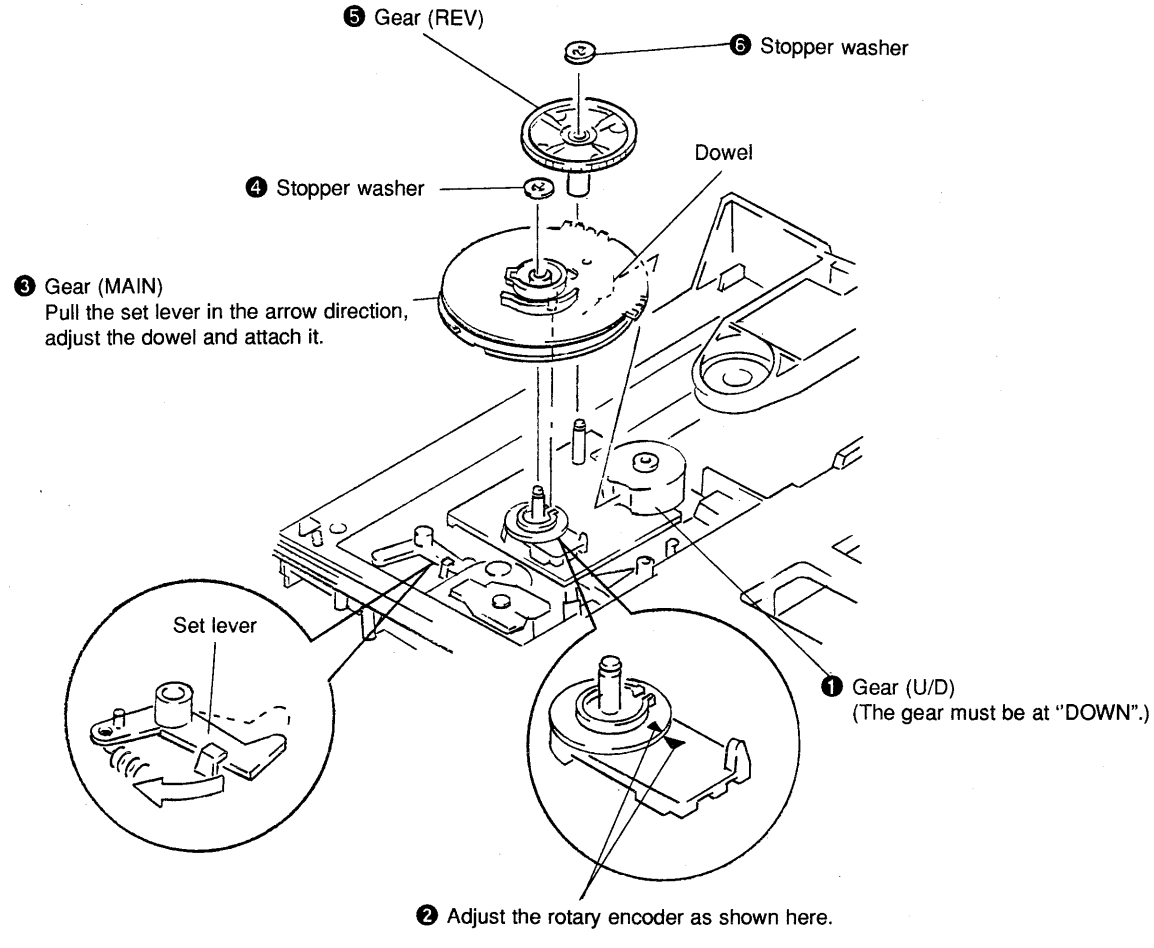
SUPPLEMENT-2

File this Supplement with the Service Manual.

Subject : Positioning the Encoder When Attaching the Gear (MAIN)

The position of the rotary encoder must be adjusted when attaching the gear (MAIN). If its position is not adjusted properly, problem may occur afterwards during operation.

: Correction


❺ Gear (REV)
❻ Stopper washer
Dowel
❹ Stopper washer
❸ Gear (MAIN)
Pull the set lever in the arrow direction, adjust the dowel and attach it.
Set lever
❶ Gear (U/D)
(The gear must be at "DOWN".)
❷ Adjust the rotary encoder as shown here.

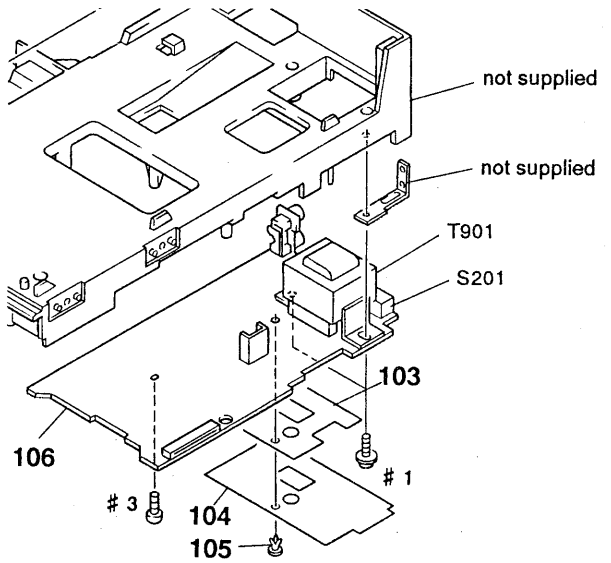
CORRECTION

Please correct your Service Manual.

6-3. CHASSIS ASSEMBLY (Page 23)

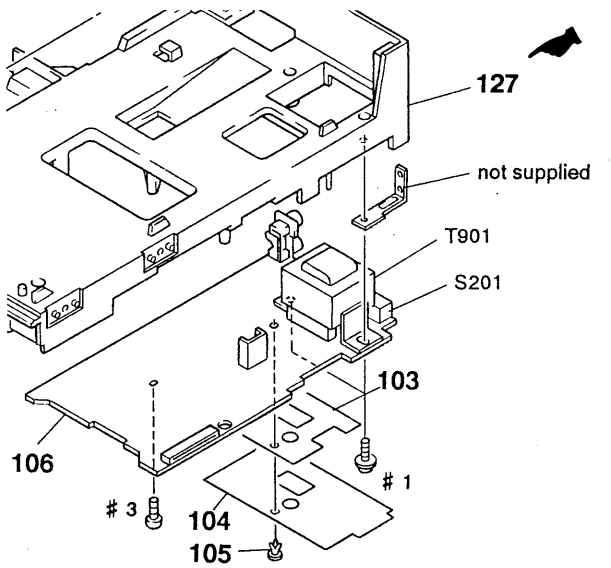
☛ : Corrected portion

Incorrect



Ref. No.	Part No.	Description	Remark
—			

Correct



Ref. No.	Part No.	Description	Remark
* 127	4-957-300-03	CHASSIS ☛	

9-957-757-82

Sony Corporation
Audio Group

English
93K09101-1D
Printed in Japan

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